Honeywell

Voyager™ 1400g Series

Area-Imaging Scanner

User's Guide

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Web Address: www.honeywellaidc.com

Product Agency Compliance

USA

FCC Part 15 Subpart B Class B

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: “Something About Interference.” This is available at FCC local regional offices. Honeywell is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Honeywell. The correction is the responsibility of the user.

Use only shielded data cables with this system. This unit has been tested with cables less than 3 meters. Cables greater than 3 meters may not meet class B performance.

Caution: Any changes or modifications made to this equipment not expressly approved by Honeywell may void the FCC authorization to operate this equipment.

UL Statement

UL listed: UL60950-1, 2nd Edition.

Canada

Industry Canada ICES-003

This Class B digital apparatus complies with Canadian ICES-003. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Conformité à la règlementation canadienne

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada. Son fonctionnement est assujetti aux conditions suivantes :

1. Cet appareil ne doit pas causer de brouillage préjudiciable.
2. Cet appareil doit pouvoir accepter tout brouillage reçu, y compris le brouillage pouvant causer un fonctionnement indésirable.

C-UL Statement

C-UL listed: CSA C22.2 No.60950-1-07, 2nd Edition.

Europe

The CE marking indicates compliance with the following directives:

- 2004/108/EC EMC
- 2011/65/EU RoHS (Recast)

In addition, complies to 2006/95/EC Low Voltage Directive, when shipped with recommended power supply.

European contact:

Honeywell Imaging & Mobility Europe BV
Nijverheidsweg 9-13
5627 BT Eindhoven
The Netherlands

Honeywell Scanning & Mobility Product Environmental Information

Refer to www.honeywellaidc.com/environmental for the RoHS / REACH / WEEE information.

Australia/NZ

C-Tick Statement

Conforms to AS/NZS 3548 EMC requirement

Russia

Gost-R certificate

South Korea

The product meets Korean agency approval for Class B equipment:

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며,

모든 지역에서 사용할 수 있습니다.

Taiwan

If the following label is attached to your product, the product meets Taiwan agency approval:

BSMI Standard: CNS13438, CNS14336-1

依據標準 : CNS13438, CNS14336-1

International

LED Safety Statement

The LED has been tested and classified as “EXEMPT RISK GROUP” to the standard: IEC 62471:2006.

CB Scheme

Certified to CB Scheme IEC 60950-1, Second Edition.

Patents

For patent information, please refer to www.hsmpats.com.

Solids and Water Protection

The Voyager 1400g has a rating of IP42, immunity of foreign particles and dripping water.

Warning

To reduce the possibility of heat-related injuries, avoid touching sections of the scanner that feel warm.

Required Safety Labels

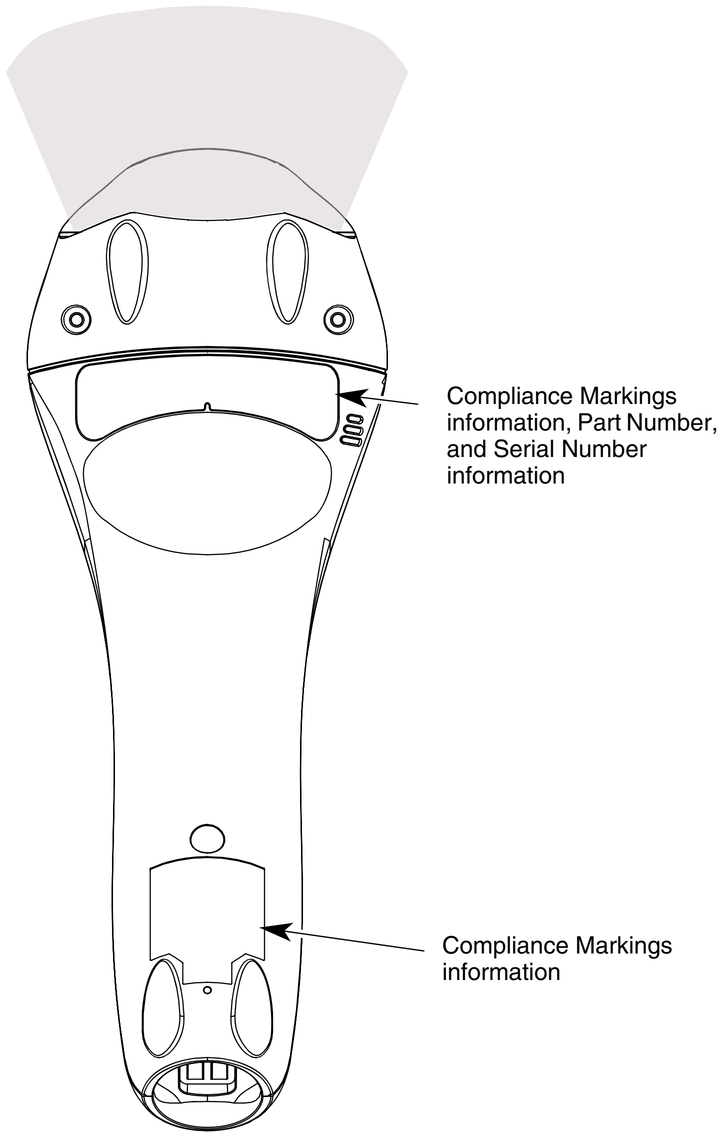


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Getting Started

About This Manual

This User's Guide provides installation and programming instructions for the Voyager™ 1400g area-imaging scanner. Product specifications, dimensions, warranty, and customer support information are also included.

Note: The selections in this User's Guide are dependent on the Voyager 1400g model you have purchased.
PDF bar codes can only be read by models 1400gPDF or 1400g2D and cannot be read by model 1400g1D.
2 dimensional bar codes can only be read by model 1400g2D and cannot be read by models 1400gPDF or 1400g1D.

Honeywell bar code scanners are factory programmed for the most common terminal and communications settings. If you need to change these settings, programming is accomplished by scanning the bar codes in this guide.

An asterisk (*) next to an option indicates the default setting.

Unpacking Your Device

After you open the shipping carton containing the product, take the following steps:

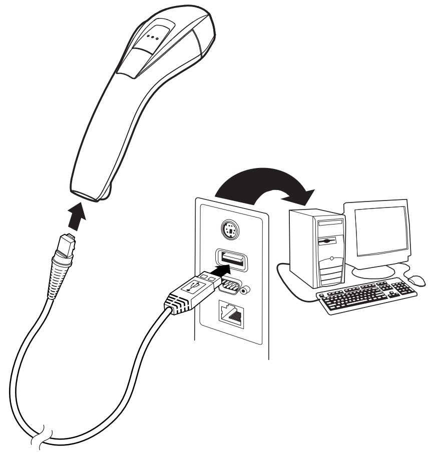
- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
- Make sure the items in the carton match your order.
- Save the shipping container for later storage or shipping.

Connecting the Device

Connecting with USB

A scanner can be connected to the USB port of a computer.

1. Connect the appropriate interface cable to the device first, then to the computer.



2. The scanner beeps.

3. Verify the scanner operation by scanning a bar code from the Sample Symbols in the back of this manual.

The unit defaults to a USB PC Keyboard. Refer to page 2-4 for other USB terminal settings.

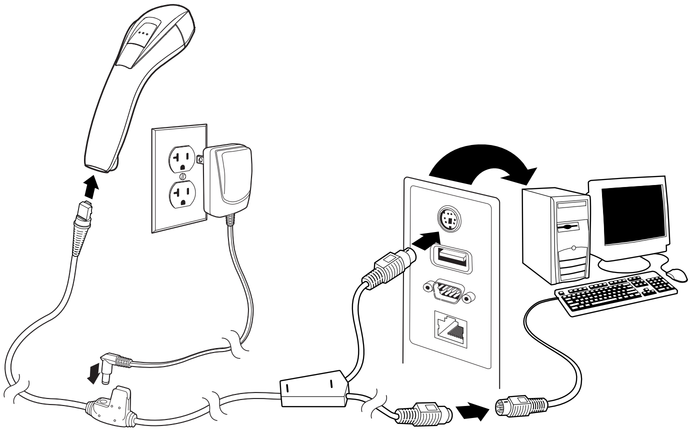
For additional USB programming and technical information, refer to “USB Application Note,” available at www.honeywellaidc.com.

Connecting with Keyboard Wedge

A scanner can be connected between the keyboard and PC as a “keyboard wedge,” where the scanner provides data output that is similar to keyboard entries. The following is an example of a keyboard wedge connection:

1. Turn off power and disconnect the keyboard cable from the back of the terminal/computer.

2. Connect the appropriate interface cable to the device and to the terminal/computer.



3. Turn the terminal/computer power back on. The scanner beeps.

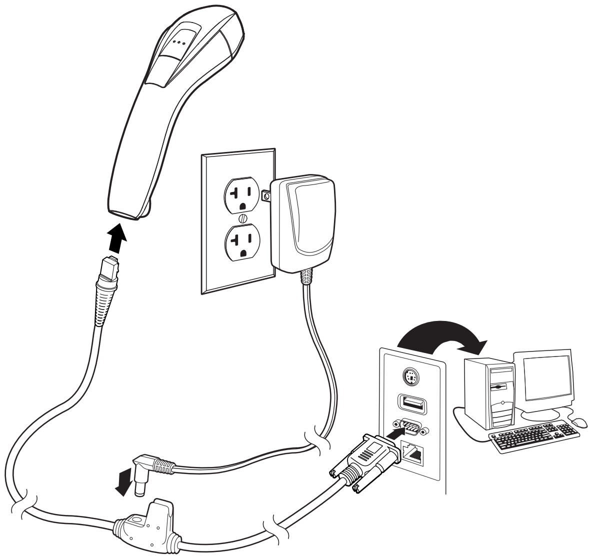
4. Verify the scanner operation by scanning a bar code from the Sample Symbols in the back of this manual. The scanner beeps once.

The unit defaults to an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard. A carriage return (CR) suffix is added to bar code data.

Connecting with RS232 Serial Port

1. Turn off power to the terminal/computer.
2. Connect the appropriate interface cable to the scanner.

Note: For the scanner to work properly, you must have the correct cable for your type of terminal/computer.



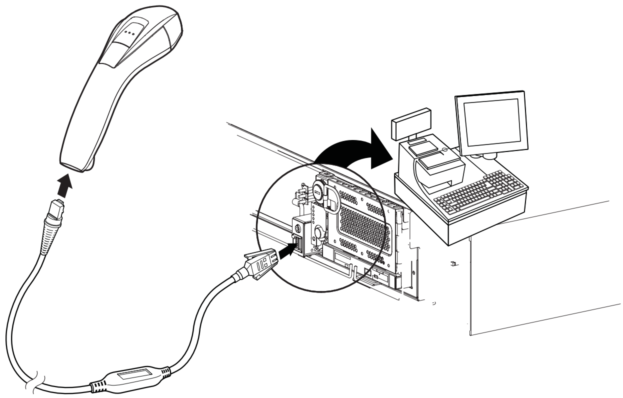
3. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.
4. Once the scanner has been fully connected, power up the computer.

This interface programs 115,200 baud, 8 data bits, no parity, and 1 stop bit.

Connecting with RS485

A scanner or cordless base can be connected for an IBM POS terminal interface.

1. Connect the appropriate interface cable to the device, then to the computer.

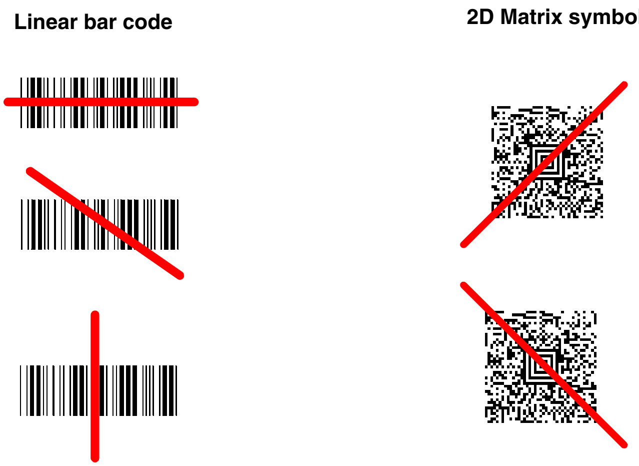


2. Turn the terminal/computer power back on. The scanner beeps.
3. Verify the scanner or cordless base operation by scanning a bar code from the Sample Symbols in the back of this manual. The scanner beeps once.

For further RS485 settings, refer to RS485, page 2-2.

Reading Techniques

The scanner has a view finder that projects a bright red aiming beam that corresponds to the scanner's horizontal field of view. The aiming beam should be centered over the bar code, but it can be positioned in any direction for a good read.



The aiming beam or pattern is smaller when the scanner is closer to the code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit. To read single or multiple symbols (on a page or on an object), hold the scanner at an appropriate distance from the target, press the button, and center the aiming beam or pattern on the symbol. If the code being scanned is highly reflective (e.g., laminated), it may be necessary to tilt the code up 15° to 18° to prevent unwanted reflection.

Menu Bar Code Security Settings

Honeywell scanners are programmed by scanning menu bar codes or by sending serial commands to the scanner. If you want to restrict the ability to scan menu codes, you can use the Menu Bar Code Security settings. Please contact the nearest technical support office (see Customer Support on page 12-1) for further information.

Setting Custom Defaults

You have the ability to create a set of menu commands as your own, custom defaults. To do so, scan the **Set Custom Defaults** bar code below before scanning the menu commands for your custom defaults. If a menu command requires scanning numeric codes from the back cover, then a **Save** code, that entire sequence will be saved to your custom defaults. When you have entered all the commands you want to save for your custom defaults, scan the **Save Custom Defaults** bar code.

MNUCDP.

Set Custom Defaults

MNUCDS.

Save Custom Defaults

You may have a series of custom settings and want to correct a single setting. To do so, just scan the new setting to overwrite the old one. For example, if you had previously saved the setting for Beeper Volume at Low to your custom defaults, and decide you want the beeper volume set to High, just scan the **Set Custom Defaults** bar code, then scan the Beeper Volume High menu code, and then **Save Custom Defaults**. The rest of the custom defaults will remain, but the beeper volume setting will be updated.

Resetting the Custom Defaults

If you want the custom default settings restored to your scanner, scan the **Activate Custom Defaults** bar code below. This is the recommended default bar code for most users. It resets the scanner to the custom default settings. If there are no custom defaults, it will reset the scanner to the factory default settings. Any settings that have not been specified through the custom defaults will be defaulted to the factory default settings.

DEFALT.

Activate Custom Defaults

2

Programming the Interface

Introduction

This chapter describes how to program your system for the desired interface.

Programming the Interface - Plug and Play

Plug and Play bar codes provide instant scanner set up for commonly used interfaces.

Note: After you scan one of the codes, power cycle the host terminal to have the interface in effect.

Keyboard Wedge

If you want your system programmed for an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard, scan the bar code below. Keyboard wedge is the default interface.

Note: The following bar code also programs a carriage return (CR) suffix.

PAP_AT.

IBM PC AT and Compatibles with CR suffix

Laptop Direct Connect

For most laptops, scanning the **Laptop Direct Connect** bar code allows operation of the scanner in parallel with the integral keyboard. The following **Laptop Direct Connect** bar code also programs a carriage return (CR) suffix and turns on Emulate External Keyboard (page 2-17).

PAPLTD.

Laptop Direct Connect with CR suffix

RS232 Serial Port

The **RS232 Interface** bar code is used when connecting to the serial port of a PC or terminal. The following **RS232 Interface** bar code also programs a carriage return (CR) and a line feed (LF) suffix, baud rate, and data format as indicated below. It also changes the trigger mode to manual.

Option	Setting
Baud Rate	115,200 bps
Data Format	8 data bits, no parity bit, 1 stop bit

PAP232.

RS232 Interface

RS485

Scan one of the following "Plug and Play" codes to program the scanner for an IBM POS terminal interface.

Note: After scanning one of these codes, you must power cycle the cash register.

PAPP5B.

IBM Port 5B Interface

PAP9B1.

IBM Port 9B HHBCR-1 Interface

PAPP17.

IBM Port 17 Interface

PAP9B2.

IBM Port 9B HHBCR-2 Interface

Each bar code above also programs the following suffixes for each symbology:

Symbology	Suffix	Symbology	Suffix
EAN 8	0C	Code 39	00 0A 0B
EAN 13	16	Interleaved 2 of 5	00 0D 0B
UPC A	0D	Code 128 *	00 0A 0B
UPC E	0A	Code 128 **	00 18 0B
		MaxiCode	00 2F 0B

* Suffixes programmed for Code 128 with IBM 4683 Port 5B, IBM 4683 Port 9B HHBCR-1, and IBM 4683 Port 17 Interfaces

**Suffixes programmed for Code 128 with IBM 4683 Port 9 HHBCR-2 Interface

RS485 Packet Mode

The following selection allows you to break up large bar code data into smaller packets on an IBM POS terminal. To break up large bar codes into small packets, scan the Packet Mode On bar code below. Scan the Packet Mode Off bar code if you want large bar code data to be sent to the host in a single chunk. *Default = Packet Mode Off.*

RTLPDF0.

*** Packet Mode Off**

RTLPDF1.

Packet Mode On

RS485 Packet Length

If you are using Packet mode, you can specify the size of the data "packet" that is sent to the host. Scan the **Packet Length** bar code, then then the packet size (from 20 - 256) from the Programming Chart inside the back cover of this manual, then **Save**. *Default = 40*.

RTLMPS.

Packet Length

USB IBM SurePos

Scan one of the following “Plug and Play” codes to program the scanner for an IBM SurePos (USB handheld scanner) or IBM SurePos (USB tabletop scanner) interface.

Note: After scanning one of these codes, you must power cycle the cash register.

PAPSPH.

USB IBM SurePos (USB Handheld Scanner) Interface

PAPSPT.

USB IBM SurePos (USB Tabletop Scanner) Interface

Each bar code above also programs the following suffixes for each symbology:

Symbology	Suffix	Symbology	Suffix
EAN 8	0C	Code 39	00 0A 0B
EAN 13	16	Interleaved 2 of 5	00 0D 0B
UPC A	0D	Code 128	00 18 0B
UPC E	0A	Code 39	00 0A 0B

USB PC or Macintosh Keyboard

Scan one of the following codes to program the scanner for USB PC Keyboard or USB Macintosh Keyboard. Scanning these codes also adds a CR and LF.

PAP124.

USB Keyboard (PC)

PAP125.

USB Keyboard (Mac)

TRMUSB134.

USB Japanese Keyboard (PC)

USB HID

Scan the following code to program the scanner for USB HID bar code scanners.

PAP131.

USB HID Bar Code Scanner

USB Serial

Scan the following code to program the scanner to emulate a regular RS232-based COM Port. If you are using a Microsoft® Windows® PC, you will need to download a driver from the Honeywell website (www.honeywellaidc.com). The driver will use the next available COM Port number. Apple® Macintosh computers recognize the scanner as a USB CDC class device and automatically uses a class driver.

TRMUSB130.

USB Serial

Note: No extra configuration (e.g., baud rate) is necessary.

CTS/RTS Emulation

USBCTS1.

CTS/RTS Emulation On

USBCTS0.

*** CTS/RTS Emulation Off**

ACK/NAK Mode

USBACK1.

ACK/NAK Mode On

USBACK0.

*** ACK/NAK Mode Off**

Verifone® Ruby Terminal Default Settings

Scan the following Plug and Play code to program the scanner for a Verifone Ruby terminal. This bar code sets the baud rate to 1200 bps and the data format to 8 data bits, no parity bit, 1 stop bit. It also also adds a line feed (LF) suffix and programs the following prefixes for each symbology:

Symbology	Prefix
UPC-A	A
UPC-E	A
EAN-8	FF
EAN-13	F

PAPRBY.

Verifone Ruby Settings

Gilbarco® Terminal Default Settings

Scan the following Plug and Play code to program the scanner for a Gilbarco terminal. This bar code sets the baud rate to 2400 bps and the data format to 7 data bits, even parity, 2 stop bits. It also also adds a carriage return (CR) suffix and programs the following prefixes for each symbology:

Symbology	Prefix
UPC-A	A
UPC-E	E0
EAN-8	FF
EAN-13	F

PAPGLB.

Gilbarco Settings

Honeywell Bioptic Aux Port Configuration

Scan the following Plug and Play code to program the scanner for a Honeywell bioptic scanner auxiliary port configuration. This bar code sets the baud rate to 38400 bps and the data format to 8 data bits, no parity, 1 stop bit.

PAPBIO.

Honeywell Bioptic Settings

Datalogic™ Magellan© Bioptic Aux Port Configuration

Scan the following Plug and Play code to program the scanner for a Datalogic Magellan bioptic scanner auxiliary port configuration. This bar code sets the baud rate to 9600 bps and the data format to 8 data bits, no parity, 1 stop bit.

PAPMAG.

Datalogic Magellan Bioptic Settings

NCR Bioptic Aux Port Configuration

Scan the following Plug and Play code to program the scanner for an NCR bioptic scanner auxiliary port configuration. The following prefixes are programmed for each symbology:

Symbology	Prefix	Symbology	Prefix
UPC-A	A	Interleaved 2 of 5	b
UPC-E	E0	Code 128	f
		GS1 DataBar Omnidirecitonal	r
EAN-8	FF	GS1 DataBar Expanded	r
EAN-13	F	Codabar	N
Code 39	a	Code 32 Pharmaceutical (PARAF)	a

PAPNCR.

NCR Bioptic Settings

Wincor Nixdorf Terminal Default Settings

Scan the following Plug and Play code to program the scanner for a Wincor Nixdorf terminal. This bar code sets the baud rate to 9600 bps and the data format to 8 data bits, no parity, 1 stop bit.

PAPWNX.

Wincor Nixdorf Terminal Settings

Wincor Nixdorf Beetle™ Terminal Default Settings

Scan the following Plug and Play code to program the scanner for a Wincor Nixdorf Beetle terminal. The following prefixes are programmed for each symbology:

Symbology	Prefix	Symbology	Prefix
Code 128	K	EAN-13	A
Code 93	L	GS1-128	P
Codabar	N	Interleaved 2 of 5	I
UPC-A	A0	Plessey	O
UPC-E	C	Straight 2 of 5 IATA	H
EAN-8	B	All other bar codes	M

PAPBTL.

Wincor Nixdorf Beetle Settings

Keyboard Country Layout

Scan the appropriate country code below to program the keyboard layout for your country or language. As a general rule, the following characters are supported, but need special care for countries other than the United States:
@ | $ # { } [ ] = / ‘ \ < > ~

KBDCTY0.
*** United States**

KBDCTY88.
United States (Dvorak left)

KBDCTY30.
United States (International)

KBDCTY81.
Azeri (Cyrillic)

KBDCTY82.
Belarus

KBDCTY33.
Bosnia

KBDCTY87.
United States (Dvorak)

KBDCTY89.
United States (Dvorak right)

KBDCTY35.
Albania

KBDCTY80.
Azeri (Latin)

KBDCTY1.
Belgium

KBDCTY16.
Brazil

Keyboard Country (continued)

KBDCTY52.
Bulgaria (Cyrillic)

KBDCTY54.
Canada (French legacy)

KBDCTY55.
Canada (Multilingual)

KBDCTY15.
Czech

KBDCTY39.
Czech (QWERTY)

KBDCTY8.
Denmark

KBDCTY59.
Brazil (MS)

KBDCTY53.
Bulgaria (Latin)

KBDCTY18.
Canada (French)

KBDCTY32.
Croatia

KBDCTY40.
Czech (Programmers)

KBDCTY38.
Czech (QWERTZ)

KBDCTY11.
Dutch (Netherlands)

Keyboard Country (continued)

KBDCTY83.
Faeroese

KBDCTY3.
France

KBDCTY4.
Germany

KBDCTY64.
Greek (220 Latin)

KBDCTY65.
Greek (319 Latin)

KBDCTY63.
Greek (Latin)

KBDCTY41.
Estonia

KBDCTY2.
Finland

KBDCTY84.
Gaelic

KBDCTY17.
Greek

KBDCTY61.
Greek (220)

KBDCTY62.
Greek (319)

KBDCTY66.
Greek (MS)

Keyboard Country (continued)

KBDCTY12.
Hebrew

KBDCTY19.
Hungary

KBDCTY73.
Irish

KBDCTY5.
Italy

KBDCTY78.
Kazakh

KBDCTY14.
Latin America

KBDCTY60.
Greek (Polytonic)

KBDCTY50.
Hungarian (101 key)

KBDCTY75.
Iceland

KBDCTY56.
Italian (142)

KBDCTY28.
Japan ASCII

KBDCTY79.
Kyrgyz (Cyrillic)

KBDCTY42.
Latvia

Keyboard Country (continued)

KBDCTY44.
Lithuania

KBDCTY34.
Macedonia

KBDCTY86.
Mongolian (Cyrillic)

KBDCTY20.
Poland

KBDCTY58.
Polish (Programmers)

KBDCTY25.
Romania

KBDCTY43.
Latvia (QWERTY)

KBDCTY45.
Lithuania (IBM)

KBDCTY74.
Malta

KBDCTY9.
Norway

KBDCTY57.
Polish (214)

KBDCTY13.
Portugal

KBDCTY26.
Russia

Keyboard Country (continued)

KBDCTY68.

Russian (Typewriter)

KBDCTY37.

Serbia (Cyrillic)

KBDCTY22.

Slovakia

KBDCTY48.

Slovakia (QWERTZ)

KBDCTY10.

Spain

KBDCTY23.

Sweden

KBDCTY67.

Russian (MS)

KBDCTY21.

SCS

KBDCTY36.

Serbia (Latin)

KBDCTY49.

Slovakia (QWERTY)

KBDCTY31.

Slovenia

KBDCTY51.

Spanish variation

KBDCTY29.

Switzerland (French)

Keyboard Country (continued)

KBDCTY85.
Tatar

KBDCTY24.
Turkey Q

KBDCTY7.
United Kingdom

KBDCTY88.
United States (Dvorak left)

KBDCTY30.
United States (International)

KBDCTY6.
Switzerland (German)

KBDCTY27.
Turkey F

KBDCTY76.
Ukrainian

KBDCTY89.
United Stated (Dvorak right)

KBDCTY87.
United States (Dvorak)

KBDCTY77.
Uzbek (Cyrillic)

Keyboard Style

This programs keyboard styles, such as Caps Lock and Shift Lock. If you have used Keyboard Conversion settings, they will override any of the following Keyboard Style settings. *Default = Regular.*

Regular is used when you normally have the Caps Lock key off.

KBDSTY0.
*** Regular**

Caps Lock is used when you normally have the Caps Lock key on.

KBDSTY1.
Caps Lock

Shift Lock is used when you normally have the Shift Lock key on (not common to U.S. keyboards).

KBDSTY2.
Shift Lock

Automatic Caps Lock is used if you change the Caps Lock key on and off. The software tracks and reflects if you have Caps Lock on or off . This selection can only be used with systems that have an LED that notes the Caps Lock status (AT keyboards).

KBDSTY6.
Automatic Caps Lock

Autocaps via NumLock bar code should be scanned in countries (e.g., Germany, France) where the Caps Lock key cannot be used to toggle Caps Lock. The NumLock option works similarly to the regular Autocaps, but uses the NumLock key to retrieve the current state of the Caps Lock.

KBDSTY7.
Autocaps via NumLock

Emulate External Keyboard should be scanned if you do not have an external keyboard (IBM AT or equivalent).

KBDSTY5.

Emulate External Keyboard

Note: After scanning the Emulate External Keyboard bar code, you must power cycle your computer.

Keyboard Conversion

Alphabetic keyboard characters can be forced to be all upper case or all lowercase. So if you have the following bar code: "abc569GK," you can make the output "ABC569GK" by scanning **Convert All Characters to Upper Case**, or to "abc569gk" by scanning **Convert All Characters to Lower Case**.

These settings override Keyboard Style selections.

Note: If your interface is a keyboard wedge, first scan the menu code for Automatic Caps Lock (page 2-16). Otherwise, your output may not be as expected.

Default = Keyboard Conversion Off.

KBDCNV0.

*** Keyboard Conversion Off**

KBDCNV1.

Convert All Characters to Upper Case

KBDCNV2.

Convert All Characters to Lower Case

Control Character Output

This selection sends a text string instead of a control character. For example, when the control character for a carriage return is expected, the output would display [CR] instead of the ASCII code of 0D. Refer to ASCII Conversion Chart (Code Page 1252) on page A-4. Only codes 00 through 1F are converted (the first column of the chart).

Note: Control + ASCII Mode overrides this mode.

Default = Off.

KBDNPE1.

Control Character Output On

KBDNPE0.

*** Control Character Output Off**

Keyboard Modifiers

This modifies special keyboard features, such as CTRL+ ASCII codes and Turbo Mode.

Control + ASCII Mode On: The scanner sends key combinations for ASCII control characters for values 00-1F. Windows is the preferred mode. All keyboard country codes are supported. DOS mode is a legacy mode, and it does not support all keyboard country codes. New users should use the Windows mode. Refer to Keyboard Function Relationships, page 7-1 for CTRL+ ASCII Values.

Windows Mode Prefix/Suffix Off: The scanner sends key combinations for ASCII control characters for values 00-1F, but it does not translate any prefix or suffix information.

Default = Control + ASCII Mode Off.

KBDCAS2.

Windows Mode Control + ASCII Mode On

KBDCAS0.

*** Control + ASCII Mode Off**

KBDCAS1.

DOS Mode Control + ASCII Mode On

KBDCAS3.

Windows Mode Prefix/Suffix Off

Turbo Mode: The scanner sends characters to a terminal faster. If the terminal drops characters, do not use Turbo Mode. *Default = Off*

KBDTMD1.

Turbo Mode On

KBDTMD0.

*** Turbo Mode Off**

Numeric Keypad Mode: Sends numeric characters as if entered from a numeric keypad. *Default = Off*

KBDNPS1.

Numeric Keypad Mode On

KBDNPS0.

*** Numeric Keypad Mode Off**

Automatic Direct Connect Mode: This selection can be used if you have an IBM AT style terminal and the system is dropping characters. *Default = Off*

KBDADC1.

Automatic Direct Connect Mode On

KBDADC0.

*** Automatic Direct Connect Mode Off**

RS232 Baud Rate

Baud Rate sends the data from the scanner to the terminal at the specified rate. The host terminal must be set for the same baud rate as the scanner. *Default = 9600.*

232BAD0.
300

232BAD1.
600

232BAD2.
1200

232BAD3.
2400

232BAD4.
4800

232BAD5.
*** 9600**

232BAD6.
19200

232BAD7.
38400

232BAD8.
57,600

232BAD9.
115,200

RS232 Word Length: Data Bits, Stop Bits, and Parity

Data Bits sets the word length at 7 or 8 bits of data per character. If an application requires only ASCII Hex characters 0 through 7F decimal (text, digits, and punctuation), select 7 data bits. For applications that require use of the full ASCII set, select 8 data bits per character. *Default = 8.*

Stop Bits sets the stop bits at 1 or 2. *Default = 1.*

Parity provides a means of checking character bit patterns for validity. *Default = None.*

232WRD3.
7 Data, 1 Stop, Parity Even

232WRD0.
7 Data, 1 Stop, Parity None

232WRD6.
7 Data, 1 Stop, Parity Odd

232WRD4.
7 Data, 2 Stop, Parity Even

232WRD1.
7 Data, 2 Stop Parity None

232WRD7.
7 Data, 2 Stop, Parity Odd

232WRD5.
8 Data, 1 Stop, Parity Even

232WRD2.
*** 8 Data, 1 Stop, Parity None**

232WRD8.
8 Data, 1 Stop, Parity Odd

RS232 Receiver Time-Out

The unit stays awake to receive data until the RS232 Receiver Time-Out expires. A manual trigger resets the time-out. When an RS232 receiver is sleeping, a character may be sent to wake up the receiver and reset the time-out. A transaction on the CTS line will also wake up the receiver. The receiver takes 300 milliseconds to completely come up. Change the RS232 receiver time-out by scanning the bar code below, then scanning digits from the inside back cover of this manual, then scanning **Save**. The range is 0 to 300 seconds. *Default = 0 seconds (no time-out - always on).*

232LPT.

RS232 Receiver Time-Out

RS232 Handshaking

RS232 Handshaking allows control of data transmission from the scanner using software commands from the host device. When RTS/CTS is turned **Off**, no data flow control is used.

Flow Control, No Timeout: The scanner asserts RTS when it has data to send, and will wait indefinitely for CTS to be asserted by the host.

Two-Direction Flow Control: The scanner asserts RTS when it is OK for the host to transmit. The host asserts CTS when it is OK for the device to transmit.

Flow Control with Timeout: The scanner asserts RTS when it has data to send and waits for a delay (see RS232 Timeout on page 2-23) for CTS to be asserted by the host. If the delay time expires and CTS is not asserted, the device transmit buffer is cleared and scanning may resume.
Default = RTS/CTS Off.

232CTS1.

Flow Control, No Timeout

232CTS2.

Two-Direction Flow Control

232CTS3.

Flow Control with Timeout

232CTS0.

*** RTS/CTS Off**

RS232 Timeout

When using Flow Control with Timeout, you must program the length of the delay you want to wait for CTS from the host. Set the length (in milliseconds) for a timeout by scanning the bar code below, then setting the timeout (from 1-5100 milliseconds) by scanning digits from the inside back cover, then scanning **Save**.

232DEL.

RS232 Timeout

XON/XOFF

Standard ASCII control characters can be used to tell the scanner to start sending data (**XON/XOFF On**) or to stop sending data (**XON/XOFF Off**). When the host sends the XOFF character (DC3, hex 13) to the scanner, data transmission stops. To resume transmission, the host sends the XON character (DC1, hex 11). Data transmission continues where it left off when XOFF was sent. *Default = XON/XOFF Off*.

232XON1.

XON/XOFF On

232XON0.

*** XON/XOFF Off**

ACK/NAK

After transmitting data, the scanner waits for an ACK character (hex 06) or a NAK character (hex 15) response from the host. If ACK is received, the communications cycle is completed and the scanner looks for more bar codes. If NAK is received, the last set of bar code data is retransmitted and

the scanner waits for ACK/NAK again. Turn on the ACK/NAK protocol by scanning the **ACK/NAK On** bar code below. To turn off the protocol, scan **ACK/NAK Off**. *Default = ACK/NAK Off*.

232ACK1.
ACK/NAK On

232ACK0.
*** ACK/NAK Off**

Scanner to Bioptic Communication

The following settings are used to set up communication between Honeywell scanners and bioptic scanners.

Note: The scanner's baud rate must be set to 38400 and the RS232 timeout must be set to 3000 in order to communicate with a bioptic scanner. See RS232 Baud Rate on page 2-20, and RS232 Timeout on page 2-23 for further information.

Scanner-Bioptic Packet Mode

Packet Mode On must be scanned to set the scanner's format so it is compatible with a bioptic scanner. *Default = Packet Mode Off.*

232PKT0.
*** Packet Mode Off**

232PKT2.
Packet Mode On

Scanner-Bioptic ACK/NAK Mode

Bioptic ACK/Nak On must be scanned so the scanner will wait for an ACK or NAK from a bioptic scanner after each packet is sent. The Scanner-Bioptic ACK/NAK Timeout (below) controls how long the scanner will wait for a response. *Default = Bioptic ACK/NAK Off.*

232NAK0.

*** Bioptic ACK/NAK Off**

232NAK1.

Bioptic ACK/NAK On

Scanner-Bioptic ACK/NAK Timeout

This allows you to set the length (in milliseconds) for a timeout for a bioptic scanner's ACK/NAK response. Scan the bar code below, then set the time-out (from 1-30,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**. *Default = 5100.*

232DLK.

ACK/NAK Timeout

3

Input/Output Settings

Power Up Beeper

The scanner can be programmed to beep when it's powered up. Scan the **Off** bar code(s) if you don't want a power up beep. *Default = Power Up Beeper On - Scanner.*

BEPPWR0.

Power Up Beeper Off - Scanner

BEPPWR1.

*** Power Up Beeper On - Scanner**

Beep on BEL Character

You may wish to force the scanner to beep upon a command sent from the host. If you scan the **Beep on BEL On** bar code below, the scanner will beep every time a BEL character is received from the host. *Default = Beep on BEL Off.*

BELBEP0.

***Beep on BEL Off**

BELBEP1.

Beep on BEL On

Trigger Click

To hear an audible click every time the scanner button is pressed, scan the **Trigger Click On** bar code below. Scan the **Trigger Click Off** code if you don't wish to hear the click. (This feature has no effect on serial or automatic triggering.) *Default = Trigger Click Off.*

BEPTRG0.

***Trigger Click Off**

BEPTRG1.

Trigger Click On

Good Read and Error Indicators

Beeper – Good Read

The beeper may be programmed **On** or **Off** in response to a good read. Turning this option off, only turns off the beeper response to a good read indication. All error and menu beeps are still audible. *Default = Beeper - Good Read On.*

BEPBEP0.
Beeper - Good Read Off

BEPBEP1.
*** Beeper - Good Read On**

Beeper Volume – Good Read

The beeper volume codes modify the volume of the beep the scanner emits on a good read. *Default = High.*

BEPLVL1.
Low

BEPLVL2.
Medium

BEPLVL3.
*** High**

BEPLVL0.
Off

Beeper Pitch – Good Read

The beeper pitch codes modify the pitch (frequency) of the beep the scanner emits on a good read. *Default = Medium.*

BEPFQ11600.
Low (1600 Hz)

BEPFQ12400.
*** Medium (2400 Hz)**

BEPFQ14200.
High (4200 Hz)

Beeper Pitch – Error

The beeper pitch codes modify the pitch (frequency) of the sound the scanner emits when there is a bad read or error. *Default = Razz.*

BEPFQ2250.
*** Razz (250 Hz)**

BEPFQ23250.
Medium (3250 Hz)

BEPFQ24200.
High (4200 Hz)

Beeper Duration – Good Read

The beeper duration codes modify the length of the beep the scanner emits on a good read. *Default = Normal.*

BEPBIP0.
*** Normal Beep**

BEPBIP1.
Short Beep

LED – Good Read

The LED indicator can be programmed **On** or **Off** in response to a good read. *Default = On.*

BEPLED1.

*** LED - Good Read On**

BEPLED0.

LED - Good Read Off

Number of Beeps – Good Read

The number of beeps of a good read can be programmed from 1 - 9. The same number of beeps will be applied to the beeper and LED in response to a good read. For example, if you program this option to have five beeps, there will be five beeps and five LED flashes in response to a good read. The beeps and LED flashes are in sync with one another. To change the number of beeps, scan the bar code below and then scan a digit (1-9) bar code and the **Save** bar code on the Programming Chart inside the back cover of this manual. *Default = 1.*

BEPRPT.

Number of Good Read Beeps/LED Flashes

Number of Beeps – Error

The number of beeps and LED flashes emitted by the scanner for a bad read or error can be programmed from 1 - 9. For example, if you program this option to have five error beeps, there will be five error beeps and five LED flashes in response to an error. To change the number of error beeps, scan the bar code below and then scan a digit (1-9) bar code and the **Save** bar code on the Programming Chart inside the back cover of this manual. *Default = 1.*

BEPERR.

Number of Error Beeps/LED Flashes

Good Read Delay

This sets the minimum amount of time before the scanner can read another bar code. *Default = 0 ms (No Delay).*

DLYGRD0.

*** No Delay**

DLYGRD500.

Short Delay (500 ms)

DLYGRD1000.

Medium Delay (1,000 ms)

DLYGRD1500.

Long Delay (1,500 ms)

User-Specified Good Read Delay

If you want to set your own length for the good read delay, scan the bar code below, then set the delay (from 0-30,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**.

DLYGRD.

User-Specified Good Read Delay

Manual Trigger Mode

When in manual trigger mode, the scanner scans until a bar code is read, or until the button is released. *Default = Manual Trigger-Normal.*

PAPHHF.

*** Manual Trigger - Normal**

LED Illumination - Manual Trigger

If you wish to set the illumination LED brightness, scan one of the bar codes below. This sets the LED illumination for the scanner when the trigger is pressed. *Default = High.*

Note: The LEDs are like a flash on a camera. The lower the ambient light in the room, the brighter the LEDs need to be so the scanner can "see" the bar codes.

PWRNOL7.

Low

PWRNOL15.

Medium

PWRNOL50.

Medium High

PWRNOL150.

*** High**

In-Stand Sensor Mode

This feature senses when the scanner is removed from the stand and tells it to begin manual triggering. When **Sensor On** is enabled, the scanner defaults to Presentation Mode when it is in the stand, and to Manual Trigger Mode when it is removed from the stand. *Default = Sensor On.*

TRGSSW1.

*** Sensor On**

TRGSSW0.

Sensor Off

Presentation Mode

Presentation Mode uses ambient light to detect bar codes. The LED dims until a bar code is presented to the scanner, then the LED brightens to read the code. If the light level in the room is not high enough, Presentation Mode may not work properly.

PAPPST.

Presentation Mode

Idle Illumination - Presentation Mode

Scan one of the bar codes below to set the LED illumination for the scanner when it is in an idle state in Presentation Mode. *Default = High.*

Note: If you use one of the lower Idle Illumination settings, and there is not enough ambient light, the scanner may have difficulty detecting when a bar code is presented to it. If the scanner has difficulty "waking up" to read bar codes, you may need to set the Idle Illumination to a brighter setting.

PWRIDL7.

Low

PWRIDL15.

Medium

PWRIDL50.

*** High**

Presentation Sensitivity

Presentation Sensitivity is a numeric range that increases or decreases the scanner's reaction time to bar code presentation. To set the sensitivity, scan the **Sensitivity** bar code, then scan the degree of sensitivity (from 0-20) from the inside back cover, and **Save**. 0 is the most sensitive setting, and 20 is the least sensitive. *Default = 1.*

TRGPMS.

Sensitivity

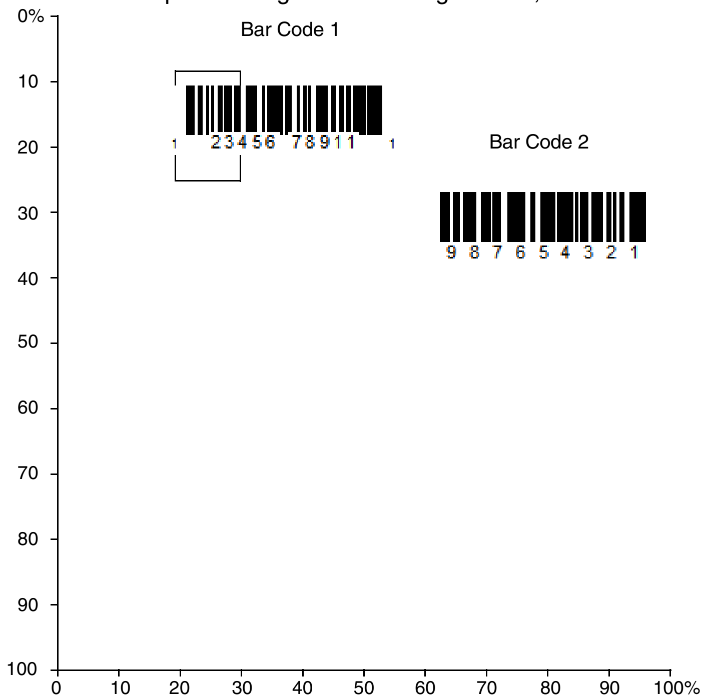
Presentation Centering

Use Presentation Centering to narrow the scanner's field of view when it is in the stand to make sure the scanner reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, Presentation Centering will insure that only the desired codes are read.

Note: To adjust centering when the scanner is hand-held, see *Centering (page 3-11).*

If a bar code is not touched by a predefined window, it will not be decoded or output by the scanner. If Presentation Centering is turned on by scanning **Presentation Centering On**, the scanner only reads codes that pass through the centering window you specify using the **Top of Presentation Centering Window, Bottom of Presentation Centering Window, Left**, and **Right of Presentation Centering Window** bar codes.

In the example below, the white box is the centering window. The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



Note: A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.

Scan **Presentation Centering On**, then scan one of the following bar codes to change the top, bottom, left, or right of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan **Save**. *Default Presentation Centering = 40% for Top and Left, 60% for Bottom and Right.*

PDCWIN1.
Presentation Centering On

PDCWIN0.
*** Presentation Centering Off**

PDCTOP.
Top of Presentation Centering Window

PDCBOT.
Bottom of Presentation Centering Window

PDCLFT.
Left of Presentation Centering Window

PDCRGT.
Right of Presentation Centering Window

CodeGate®

When CodeGate is **On**, the button is used to allow decoded data to be transmitted to the host system. The scanner remains on, scanning and decoding bar codes, but the bar code data is not transmitted until the button is pressed. When CodeGate is **Off**, bar code data is transmitted when it is decoded. *Default = CodeGate Off Out-of-Stand.*

AOSCGD0.
*** CodeGate Off Out-of-Stand**

AOSCGD1.
CodeGate On Out-of-Stand

Mobile Phone Read Mode

When this mode is selected, your scanner is optimized to read bar codes from mobile phone or other LED displays. However, the speed of scanning printed bar codes may be slightly lower when this mode is enabled.

PAPHHC.

Hand Held Scanning - Mobile Phone

PAPPSC.

Presentation Scanning - Mobile Phone

Note: To turn off Mobil Phone Read Mode, scan the Manual Trigger Mode bar code (see page 3-5).

Hands Free Time-Out

The Scan Stand and Presentation Modes are referred to as "hands free" modes. If the scanner's button is pressed when using a hands free mode, the scanner changes to manual trigger mode. You can set the time the scanner should remain in manual trigger mode by setting the Hands Free Time-Out. Once the time-out value is reached, (if there have been no further button presses) the scanner reverts to the original hands free mode.

Scan the **Hands Free Time-Out** bar code, then scan the time-out duration (from 0-300,000 milliseconds) from the inside back cover, and **Save**.   *Default = 5,000 ms.*

TRGPTO.

Hands Free Time-Out

Reread Delay

This sets the time period before the scanner can read the *same* bar code a second time. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads.

Use shorter delays in applications where repetitive bar code scanning is required. Reread Delay only works when in Presentation Mode (see page 3-7). *Default = Medium.*

DLYRRD500.
Short (500 ms)

DLYRRD750.
*** Medium (750 ms)**

DLYRRD1000.
Long (1000 ms)

DLYRRD2000.
Extra Long (2000 ms)

User-Specified Reread Delay

If you want to set your own length for the reread delay, scan the bar code below, then set the delay (from 0-30,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**.

DLYRRD.
User-Specified Reread Delay

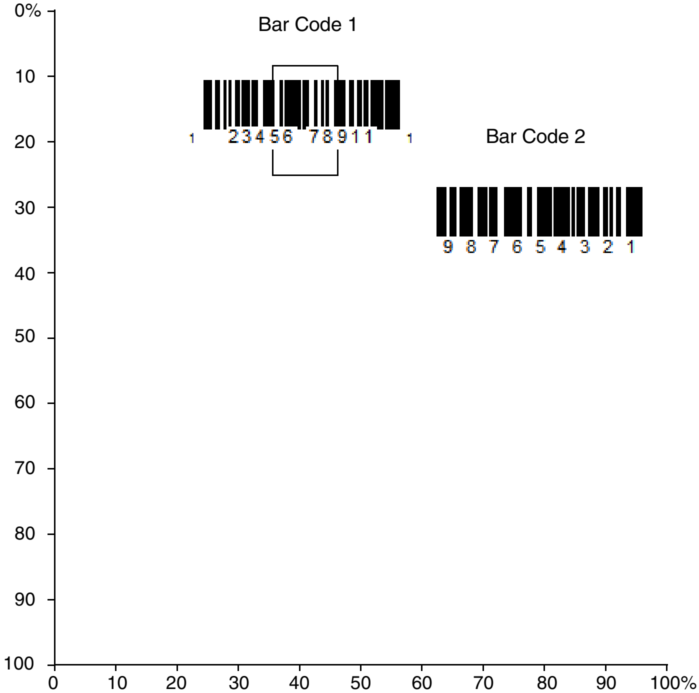
Centering

Use Centering to narrow the scanner's field of view to make sure that when the scanner is hand-held, it reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, centering will insure that only the desired codes are read.

Note: To adjust centering when the scanner is in the stand, see Presentation Centering (page 3-8).

If a bar code is not touched by a predefined window, it will not be decoded or output by the scanner. If centering is turned on by scanning **Centering On**, the scanner only reads codes that pass through the centering window you specify using the **Top of Centering Window, Bottom of Centering Window, Left**, and **Right of Centering Window** bar codes.

In the example below, the white box is the centering window. The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



Note: A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.

Scan **Centering On**, then scan one of the following bar codes to change the top, bottom, left, or right of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan **Save**. *Default Centering = 40% for Top and Left, 60% for Bottom and Right.*

DECWIN1.
Centering On

DECWIN0.
*** Centering Off**

DECTOP.
Top of Centering Window

DECBOT.
Bottom of Centering Window

DECLFT.
Left of Centering Window

DECRGT.
Right of Centering Window

No Read

With No Read turned **On**, the scanner notifies you if a code cannot be read. If using an EZConfig-Scanning Tool Scan Data Window (see page 8-2), an "NR" appears when a code cannot be read. If No Read is turned **Off**, the "NR" will not appear. *Default = Off.*

SHWNRD1.
On

SHWNRD0.
*** Off**

If you want a different notation than "NR," for example, "Error," or "Bad Code," you can edit the output message (see Data Formatting beginning on page 5-1). The hex code for the No Read symbol is 9C.

Video Reverse

Video Reverse is used to allow the scanner to read bar codes that are inverted. The **Video Reverse Off** bar code below is an example of this type of bar code. Scan **Video Reverse Only** to read *only* inverted bar codes. Scan **Video Reverse and Standard Bar Codes** to read both types of codes.

*Note: After scanning **Video Reverse Only**, menu bar codes cannot be read. You must scan **Video Reverse Off** or **Video Reverse and Standard Bar Codes** in order to read menu bar codes.*

Note: Images downloaded from the unit are not reversed. This is a setting for decoding only.

VIDREV1.

Video Reverse Only

VIDREV2

Video Reverse and Standard Bar Codes

VIDREV0.

*** Video Reverse Off**

Working Orientation

Some bar codes are direction-sensitive. For example, KIX codes and OCR can misread when scanned sideways or upside down. Use the working orientation settings if your direction-sensitive codes will not usually be presented upright to the scanner. *Default = Upright.*

Upright:

Vertical, Top to Bottom:
(Rotate CW 90°)

Upside Down:

Vertical, Bottom to Top:
(Rotate CCW 90°)

Default = Upright.

ROTATN0.
*** Upright**

ROTATN1.
Vertical, Bottom to Top

ROTATN2.
Upside Down

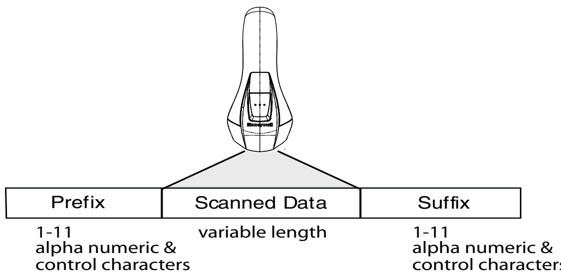
ROTATN3.
Vertical, Top to Bottom

4 Data Editing

Prefix/Suffix Overview

When a bar code is scanned, additional information is sent to the host computer along with the bar code data. This group of bar code data and additional, user-defined data is called a “message string.” The selections in this section are used to build the user-defined data into the message string.

Prefix and Suffix characters are data characters that can be sent before and after scanned data. You can specify if they should be sent with all symbologies, or only with specific symbologies. The following illustration shows the break-down of a message string:



Points to Keep In Mind

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings. *Default prefix = None. Default suffix = None*.
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the ASCII Conversion Chart (Code Page 1252), beginning on page A-4, plus Code I.D. and AIM I.D.
- You can string together several entries for several symbologies at one time.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.
- When setting up for specific symbologies (as opposed to all symbologies), the specific symbology ID value counts as an added prefix or suffix character.
- The maximum size of a prefix or suffix configuration is 200 characters, which includes header information.

To Add a Prefix or Suffix:

Step 1. Scan the **Add Prefix** or **Add Suffix** symbol (page 4-3).

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on page A-1) for the

symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is “j” and Hex ID is “6A”.

Step 3. Scan the 2 hex digits from the Programming Chart inside the back cover of this manual or scan **9**, **9** for all symbologies.

Step 4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252), beginning on page A-4, for the prefix or suffix you wish to enter.

Step 5. Scan the 2 digit hex value from the Programming Chart inside the back cover of this manual.

Step 6. Repeat Steps 4 and 5 for every prefix or suffix character.

Step 7. To add the Code I.D., scan **5**, **C**, **8**, **0**.
To add AIM I.D., scan **5**, **C**, **8**, **1**.
To add a backslash (\), scan **5**, **C**, **5**, **C**.

Note: To add a backslash (\) as in Step 7, you must scan 5C twice – once to create the leading backslash and then to create the backslash itself.

Step 8. Scan **Save** to exit and save, or scan **Discard** to exit without saving.

Repeat Steps 1-6 to add a prefix or suffix for another symbology.

Example: Add a Suffix to a specific symbology

To send a CR (carriage return) Suffix for U.P.C. only:

Step 1. Scan **Add Suffix**.

Step 2. Determine the 2 digit hex value from the Symbology Chart (included in the Symbology Charts, beginning on page A-1) for U.P.C..

Step 3. Scan **6**, **3** from the Programming Chart inside the back cover of this manual.

Step 4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252), beginning on page A-4, for the CR (carriage return).

Step 5. Scan **0**, **D** from the Programming Chart inside the back cover of this manual.

Step 6. Scan **Save**, or scan **Discard** to exit without saving.

To Clear One or All Prefixes or Suffixes

You can clear a single prefix or suffix, or clear all prefixes/suffixes for a symbology. If you have been entering prefixes and suffixes for single symbologies, you can use **Clear One Prefix (Suffix)** to delete a specific character from a symbology. When you **Clear All Prefixes (Suffixes)**, all the prefixes or suffixes for a symbology are deleted.

Step 1. Scan the **Clear One Prefix** or **Clear One Suffix** symbol.

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on page A-1) for the symbology from which you want to clear the prefix or suffix.

Step 3. Scan the 2 digit hex value from the Programming Chart inside the back cover of this manual or scan **9**, **9** for all symbologies.

Your change is automatically saved.

To Add a Carriage Return Suffix to All Symbologies

Scan the following bar code if you wish to add a carriage return suffix to all symbologies at once. This action first clears all current suffixes, then programs a carriage return suffix for all symbologies.

VSUFCR.

Add CR Suffix
All Symbologies

Prefix Selections

PREBK2.

Add Prefix

PRECL2.

Clear One Prefix

PRECA2.

Clear All Prefixes

Suffix Selections

SUFBK2.
Add Suffix

SUFCL2.
Clear One Suffix

SUFCA2.
Clear All Suffixes

Function Code Transmit

When this selection is enabled and function codes are contained within the scanned data, the scanner transmits the function code to the terminal. Charts of these function codes are provided in Supported Interface Keys starting on page 7-3. When the scanner is in keyboard wedge mode, the scan code is converted to a key code before it is transmitted. *Default = Enable.*

RMVFNC0.
*** Enable**

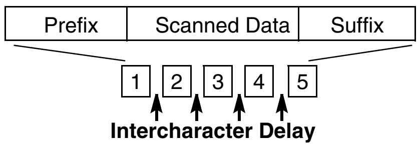
RMVFNC1.
Disable

Intercharacter, Interfunction, and Intermessage Delays

Some terminals drop information (characters) if data comes through too quickly. Intercharacter, interfunction, and intermessage delays slow the transmission of data, increasing data integrity.

Intercharacter Delay

An intercharacter delay of up to 5000 milliseconds (in 5ms increments) may be placed between the transmission of each character of scanned data. Scan the **Intercharacter Delay** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the Programming Chart inside the back cover of this manual.



DLYCHR.

Intercharacter Delay

To remove this delay, scan the **Intercharacter Delay** bar code, then set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

Note: Intercharacter delays are not supported in USB serial emulation.

User Specified Intercharacter Delay

An intercharacter delay of up to 5000 milliseconds (in 5ms increments) may be placed after the transmission of a particular character of scanned data. Scan the **Delay Length** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the Programming Chart inside the back cover of this manual.

Next, scan the **Character to Trigger Delay** bar code, then the 2-digit hex value for the ASCII character that will trigger the delay ASCII Conversion Chart (Code Page 1252), beginning on page A-4.

DLYCRX.

Delay Length

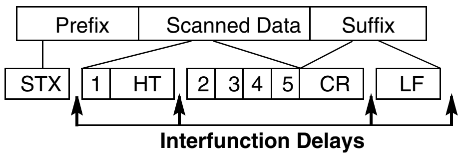
DLY_XX.

Character to Trigger Delay

To remove this delay, scan the **Delay Length** bar code, and set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

Interfunction Delay

An interfunction delay of up to 5000 milliseconds (in 5ms increments) may be placed between the transmission of each segment of the message string. Scan the **Interfunction Delay** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the Programming Chart inside the back cover of this manual.



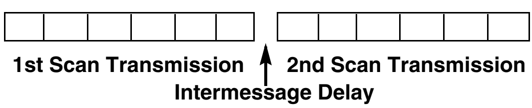
DLYFNC.

Interfunction Delay

To remove this delay, scan the **Interfunction Delay** bar code, then set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

Intermessage Delay

An intermessage delay of up to 5000 milliseconds (in 5ms increments) may be placed between each scan transmission. Scan the **Intermessage Delay** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the Programming Chart inside the back cover of this manual.



DLYMSG.

Intermessage Delay

To remove this delay, scan the **Intermessage Delay** bar code, then set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

5 Data Formatting

Data Format Editor Introduction

You may use the Data Format Editor to change the scanner's output. For example, you can use the Data Format Editor to insert characters at certain points in bar code data as it is scanned. The selections in the following pages are used only if you wish to alter the output. *Default Data Format setting = None.*

Normally, when you scan a bar code, it gets outputted automatically; however when you create a format, you must use a "send" command (see Send Commands on page 5-4) within the format program to output data.

Multiple formats may be programmed into the scanner. They are stacked in the order in which they are entered. However, the following list presents the order in which formats are applied:

1. Specific Terminal ID, Actual Code ID, Actual Length
2. Specific Terminal ID, Actual Code ID, Universal Length
3. Specific Terminal ID, Universal Code ID, Actual Length
4. Specific Terminal ID, Universal Code ID, Universal Length
5. Universal Terminal ID, Actual Code ID, Actual Length
6. Universal Terminal ID, Actual Code ID, Universal Length
7. Universal Terminal ID, Universal Code ID, Actual Length
8. Universal Terminal ID, Universal Code ID, Universal Length

The maximum size of a data format configuration is 2000 bytes, which includes header information.

If you have changed data format settings, and wish to clear all formats and return to the factory defaults, scan the **Default Data Format** code below.

DFMDF3.

*** Default Data Format**

Add a Data Format

Step 1. Scan the **Enter Data Format** symbol (page 5-2).

Step 2. Select **Primary/Alternate Format**
Determine if this will be your primary data format, or one of 3 alternate formats. This allows you to save a total of 4 different data formats. To program your primary format, scan **0** using the Programming Chart inside the back cover of this manual. If you are programming an alternate format, scan **1**, **2**, or **3**, depending on which alternate format

you are programming. (See Primary/Alternate Data Formats on page 5-8 for further information.)

Step 3. Terminal Type

Refer to Terminal ID Table (page 5-4) and locate the Terminal ID number for your PC. Scan three numeric bar codes on the inside back cover to program the scanner for your terminal ID (you must enter 3 digits). For example, scan **0 0 3** for an AT wedge.

Note: The wildcard for all terminal types is 099.

Step 4. Code I.D.

In the Symbology Charts, beginning on page A-1, find the symbology to which you want to apply the data format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart inside the back cover of this manual.

Note: If you are creating a data format for Batch Mode Quantity, use 35 for the Code I.D.

Step 5. Length

Specify what length (up to 9999 characters) of data will be acceptable for this symbology. Scan the four digit data length from the Programming Chart inside the back cover of this manual. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.)

Step 6. Editor Commands

Refer to Data Format Editor Commands (page 5-4). Scan the symbols that represent the command you want to enter.

Step 7. Scan **Save** to save your data format, or **Discard** to exit without saving your changes.

DFMBK3.

Enter Data Format

MNUSAV.

Save

MNUABT.

Discard

Other Programming Selections

Clear One Data Format

This deletes one data format for one symbology. If you are clearing the primary format, scan **0** from the Programming Chart inside the back cover of this manual. If you are clearing an alternate format, scan **1**, **2**, or **3**, depending on the format you are clearing. Scan the Terminal Type and Code I.D. (see Symbology Charts on page A-1), and the bar code data length for the specific data format that you want to delete. All other formats remain unaffected.

Clear all Data Formats

This clears all data formats.

Save to exit and save your data format changes.

Discard to exit without saving any data format changes.

DFMCL3.

Clear One Data Format

DFMCA3.

Clear All Data Formats

MNUSAV.

Save

MNUABT.

Discard

Terminal ID Table

Terminal	Model(s)	Terminal ID
IBM	PC/AT and compatibles	003
	USB SurePOS Handheld Scanner	128
	USB SurePOS Tabletop Scanner	129
RS232	True	000
	TTL	000
USB	PC Keyboard	124
	Mac Keyboard	125
	Japanese Keyboard (PC)	134
	HID POS	131
	Serial	130

Data Format Editor Commands

Send Commands

Send all characters

F1 Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character. *Syntax = F1xx* where xx stands for the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Send a number of characters

F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for "nn" characters or through the last character in the input message, followed by character "xx." *Syntax = F2nnxx* where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Send all characters up to a particular character

F3 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character "ss," followed by an insert character. The cursor is moved forward to the "ss" character. *Syntax = F3ssxx* where ss stands for the search character's hex value for its

ASCII code, and xx stands for the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Send all but the last characters

E9 Include in the output message all but the last "nn" characters, starting from the current cursor position. The cursor is moved forward to one position past the last input message character included. *Syntax = E9nn* where nn stands for the numeric value (00-99) for the number of characters that will not be sent at the end of the message.

Insert a character multiple times

F4 Send "xx" character "nn" times in the output message, leaving the cursor in the current position. *Syntax = F4xxnn* where xx stands for the insert character's hex value for its ASCII code, and nn is the numeric value (00-99) for the number of times it should be sent.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Move Commands

Move the cursor forward a number of characters

F5 Move the cursor ahead "nn" characters from current cursor position. *Syntax = F5nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved ahead.

Move the cursor backward a number of characters

F6 Move the cursor back "nn" characters from current cursor position. *Syntax = F6nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved back.

Move the cursor to the beginning

F7 Move the cursor to the first character in the input message. *Syntax = F7.*

Move the cursor to the end

EA Move the cursor to the last character in the input message. *Syntax = EA.*

Search Commands

Search forward for a character

F8 Search the input message forward for "xx" character from the current cursor position, leaving the cursor pointing to the "xx" character. *Syntax = F8xx* where xx stands for the search character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Search backward for a character

F9 Search the input message backward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F9xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Search forward for a non-matching character

E6 Search the input message forward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E6xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Search backward for a non-matching character

E7 Search the input message backward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E7xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Miscellaneous Commands

Suppress characters

FB Suppress all occurrences of up to 15 different characters, starting at the current cursor position, as the cursor is advanced by other commands. When the FC command is encountered, the suppress function is terminated. The cursor is not moved by the FB command.
Syntax = FBnnxxyy . .zz where nn is a count of the number of suppressed characters in the list, and xxyy .. zz is the list of characters to be suppressed.

Stop suppressing characters

FC Disables suppress filter and clear all suppressed characters. *Syntax = FC.*

Replace characters

E4 Replaces up to 15 characters in the output message, without moving the cursor. Replacement continues until the E5 command is encountered. *Syntax =* $E4nnxx_1xx_2yy_1yy_2...zz_1zz_2$ where nn is the total count of of the number of characters in the list (characters to be replaced plus replacement characters); xx_1 defines characters to be replaced and xx_2 defines replacement characters, continuing through zz_1 and zz_2.

Stop replacing characters

E5 Terminates character replacement. *Syntax = E5.*

Compare characters

FE Compare the character in the current cursor position to the character "xx." If characters are equal, move the cursor forward one position. *Syntax = FExx* where xx stands for the comparison character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

Check for a number

EC Check to make sure there is an ASCII number at the current cursor position. The format is aborted if the character is not numeric.

Check for non-numeric character

ED Check to make sure there is a non-numeric ASCII character at the current cursor position. The format is aborted if the character is numeric.

Insert a delay

EF Inserts a delay of up to 49,995 milliseconds (in multiples of 5), starting from the current cursor position. Syntax = EFnnnn where nnnn stands for the delay in 5ms increments, up to 9999. This command can only be used with keyboard emulation.

Data Formatter

When Data Formatter is turned Off, the bar code data is output to the host as read, including prefixes and suffixes.

DFM_EN0.

Data Formatter Off

You may wish to require the data to conform to a data format you have created and saved. The following settings can be applied to your data format:

Data Formatter On, Not Required, Keep Prefix/Suffix
Scanned data is modified according to your data format, and prefixes and suffixes are transmitted.

Data Format Required, Keep Prefix/Suffix
Scanned data is modified according to your data format, and prefixes and suffixes are transmitted. Any data that does not match your data format requirements generates an error tone and the data in that bar code is not transmitted.

Default = Data Formatter On, Not Required, Keep Prefix/Suffix.

DFM_EN1.

*** Data Formatter On, Not Required, Keep Prefix/Suffix**

DFM_EN2.

Data Format Required, Keep Prefix/Suffix

Primary/Alternate Data Formats

You can save up to four data formats, and switch between these formats. Your primary data format is saved under **0**. Your other three formats are saved under **1**, **2**, and **3**. To set your device to use one of these formats, scan one of the bar codes below.

ALTFNM0.

Primary Data Format

ALTFNM1.

Data Format 1

ALTFNM2.

Data Format 2

ALTFNM3.

Data Format 3

6 Symbologies

This programming section contains the following menu selections. Refer to Chapter 9 for settings and defaults.

- All Symbologies
- Aztec Code
- China Post (Hong Kong 2 of 5)
- Chinese Sensible (Han Xin) Code
- Codabar
- Codablock A
- Codablock F
- Code 11
- Code 128
- Code 32 Pharmaceutical (PARAF)
- Code 39
- Code 93
- Data Matrix
- EAN/JAN-13
- EAN/JAN-8
- GS1 Composite Codes
- GS1 DataBar Expanded
- GS1 DataBar Limited
- GS1 DataBar Omnidirectional
- GS1 Emulation
- GS1-128
- Interleaved 2 of 5
- Korea Post
- Matrix 2 of 5
- MaxiCode
- MicroPDF417
- MSI
- NEC 2 of 5
- Postal Codes - 2D
- Postal Codes - Linear
- PDF417
- GS1 DataBar Omnidirectional
- QR Code
- Straight 2 of 5 IATA (two-bar start/stop)
- Straight 2 of 5 Industrial (three-bar start/stop)
- TCIF Linked Code 39 (TLC39)
- Telepen
- UPC-A
- UPC-A/EAN-13 with Extended Coupon Code
- UPC-E0
- UPC-E1

All Symbologies

If you want to decode all the symbologies allowable for your scanner, scan the ***All Symbologies On*** code. If on the other hand, you want to decode only a particular symbology, scan **All Symbologies Off** followed by the On symbol for that particular symbology.

ALLENA1.

All Symbologies On

ALLENA0.

All Symbologies Off

Note: When All Symbologies On is scanned, 2D Postal Codes are not enabled. 2D Postal Codes must be enabled separately.

Message Length Description

You are able to set the valid reading length of some of the bar code symbologies. If the data length of the scanned bar code doesn't match the valid reading length, the scanner will issue an error tone. You may wish to set the same value for minimum and maximum length to force the scanner to read fixed length bar code data. This helps reduce the chances of a misread.

EXAMPLE: Decode only those bar codes with a count of 9-20 characters.
Min. length = 09Max. length = 20

EXAMPLE: Decode only those bar codes with a count of 15 characters.
Min. length = 15Max. length = 15

For a value other than the minimum and maximum message length defaults, scan the bar codes included in the explanation of the symbology, then scan the digit value of the message length and **Save** bar codes on the Programming Chart inside the back cover of this manual. The minimum and maximum lengths and the defaults are included with the respective symbologies.

Codabar

<Default All Codabar Settings>

CBRDFT.

Codabar On/Off

CBRENA1.
*** On**

CBRENA0.
Off

Codabar Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/Stop characters.
Default = Don't Transmit.

CBRSSX1.
Transmit

CBRSSX0.
*** Don't Transmit**

Codabar Check Character

Codabar check characters are created using different "modulos." You can program the scanner to read only Codabar bar codes with Modulo 16 check characters. *Default = No Check Character.*

No Check Character indicates that the scanner reads and transmits bar code data with or without a check character.

When Check Character is set to ***Validate and Transmit***, the scanner will only read Codabar bar codes printed with a check character, and will transmit this character at the end of the scanned data.

When Check Character is set to ***Validate, but Don't Transmit***, the unit will only read Codabar bar codes printed ***with*** a check character, but will not transmit the check character with the scanned data.

CBRCK20.

*** No Check Character**

CBRCK21.

Validate Modulo 16, but Don't Transmit

CBRCK22.

Validate Modulo 16 and Transmit

Codabar Concatenation

Codabar supports symbol concatenation. When you enable concatenation, the scanner looks for a Codabar symbol having a "D" start character, adjacent to a symbol having a "D" stop character. In this case the two messages are concatenated into one with the "D" characters omitted.

A 1 2 3 4 D D 5 6 7 8 A

Select Require to prevent the scanner from decoding a single "D" Codabar symbol without its companion. This selection has no effect on Codabar symbols without Stop/Start D characters.

CBRCCT1.

On

CBRCCT0.

*** Off**

CBRCCT2.

Require

Codabar Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 2-60. Minimum Default = 4, Maximum Default = 60.

CBRMIN.

Minimum Message Length

CBRMAX.

Maximum Message Length

Code 39

< Default All Code 39 Settings >

C39DFT.

Code 39 On/Off

C39ENA1.

*** On**

C39ENA0.

Off

Code 39 Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/Stop characters. *Default = Don't Transmit.*

C39SSX1.

Transmit

C39SSX0.

*** Don't Transmit**

Code 39 Check Character

No Check Character indicates that the scanner reads and transmits bar code data with or without a check character.

When Check Character is set to **Validate, but Don't Transmit**, the unit only reads Code 39 bar codes printed with a check character, but will not transmit the check character with the scanned data.

When Check Character is set to **Validate and Transmit**, the scanner only reads Code 39 bar codes printed with a check character, and will transmit this character at the end of the scanned data. *Default = No Check Character.*

C39CK20.

*** No Check Character**

C39CK21.

Validate, but Don't Transmit

C39CK22.

Validate and Transmit

Code 39 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 0-48. Minimum Default = 0, Maximum Default = 48.

C39MIN.

Minimum Message Length

C39MAX.

Maximum Message Length

Code 39 Append

This function allows the scanner to append the data from several Code 39 bar codes together before transmitting them to the host computer. When the scanner encounters a Code 39 bar code with the append trigger char-

acter(s), it buffers Code 39 bar codes until it reads a Code 39 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). *Default = Off.*

C39APP1.

On

C39APP0.

*** Off**

Code 32 Pharmaceutical (PARAF)

Code 32 Pharmaceutical is a form of the Code 39 symbology used by Italian pharmacies. This symbology is also known as PARAF.

C39B321.

On

C39B320.

*** Off**

Full ASCII

If Full ASCII Code 39 decoding is enabled, certain character pairs within the bar code symbol will be interpreted as a single character. For example: $V will be decoded as the ASCII character SYN, and /C will be decoded as the ASCII character #. *Default = Off.*

NUL	%U	DLE	$P	SP	SPACE	0	0	@	%V	P	P	‘	%W	p	+P
SOH	$A	DC1	$Q	!	/A	1	1	A	A	Q	Q	a	+A	q	+Q
STX	$B	DC2	$R	“	/B	2	2	B	B	R	R	b	+B	r	+R
ETX	$C	DC3	$S	#	/C	3	3	C	C	S	S	c	+C	s	+S
EOT	$D	DC4	$T	$	/D	4	4	D	D	T	T	d	+D	t	+T
ENQ	$E	NAK	$U	%	/E	5	5	E	E	U	U	e	+E	u	+U
ACK	$F	SYN	$V	&	/F	6	6	F	F	V	V	f	+F	v	+V
BEL	$G	ETB	$W	‘	/G	7	7	G	G	W	W	g	+G	w	+W
BS	$H	CAN	$X	(	/H	8	8	H	H	X	X	h	+H	x	+X
HT	$I	EM	$Y	)	/I	9	9	I	I	Y	Y	i	+I	y	+Y
LF	$J	SUB	$Z	*	/J	:	/Z	J	J	Z	Z	j	+J	z	+Z
VT	$K	ESC	%A	+	/K	;	%F	K	K	[	%K	k	+K	{	%P
FF	$L	FS	%B	,	/L	<	%G	L	L	\	%L	l	+L	|	%Q
CR	$M	GS	%C	-	-	=	%H	M	M	]	%M	m	+M	}	%R
SO	$N	RS	%D	.	.	>	%I	N	N	^	%N	n	+N	~	%S
SI	$O	US	%E	/	/O	?	%J	O	O	_	%O	o	+O	DEL	%T

Character pairs /M and /N decode as a minus sign and period respectively. Character pairs /P through /Y decode as 0 through 9.

C39ASC1.

Full ASCII On

C39ASC0.

*** Full ASCII Off**

Code 39 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-

10), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

C39DCP.

Code 39 Code Page

Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >

I25DFT.

Interleaved 2 of 5 On/Off

I25ENA1.

*** On**

I25ENA0.

Off

Check Digit

No Check Digit indicates that the scanner reads and transmits bar code data with or without a check digit.

When Check Digit is set to **Validate, but Don't Transmit**, the unit only reads Interleaved 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data.

When Check Digit is set to **Validate and Transmit**, the scanner only reads Interleaved 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data. *Default = No Check Digit.*

I25CK20.

*** No Check Digit**

I25CK21.

Validate, but Don't Transmit

I25CK22.

Validate and Transmit

Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

I25MIN.

Minimum Message Length

I25MAX.

Maximum Message Length

NEC 2 of 5

< Default All NEC 2 of 5 Settings >

N25DFT.

NEC 2 of 5 On/Off

N25ENA1.

*** On**

N25ENA0.

Off

Check Digit

No Check Digit indicates that the scanner reads and transmits bar code data with or without a check digit.

When Check Digit is set to **Validate, but Don't Transmit**, the unit only reads NEC 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data.

When Check Digit is set to **Validate and Transmit**, the scanner only reads NEC 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data. *Default = No Check Digit.*

N25CK20.

*** No Check Digit**

N25CK21.

Validate, but Don't Transmit

N25CK22.

Validate and Transmit

NEC 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

N25MIN.

Minimum Message Length

N25MAX.

Maximum Message Length

Code 93

< Default All Code 93 Settings >

C93DFT.

Code 93 On/Off

C93ENA1.

* On

C93ENA0.

Off

Code 93 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

C93MIN.

Minimum Message Length

C93MAX.

Maximum Message Length

Code 93 Append

This function allows the scanner to append the data from several Code 93 bar codes together before transmitting them to the host computer. When this function is enabled, the scanner stores those Code 93 bar codes that start with a space (excluding the start and stop symbols), and does not immediately transmit the data. The scanner stores the data in the order in

which the bar codes are read, deleting the first space from each. The scanner transmits the appended data when it reads a Code 93 bar code that starts with a character other than a space. *Default = Off.*

C93APP1.

On

C93APP0.

*** Off**

Code 93 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-10), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

C93DCP.

Code 93 Code Page

Straight 2 of 5 Industrial (three-bar start/stop)

<Default All Straight 2 of 5 Industrial Settings>

R25DFT.

Straight 2 of 5 Industrial On/Off

R25ENA1.

On

R25ENA0.

*** Off**

Straight 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

R25MIN.

Minimum Message Length

R25MAX.

Maximum Message Length

Straight 2 of 5 IATA (two-bar start/stop)

<Default All Straight 2 of 5 IATA Settings>

A25DFT.

Straight 2 of 5 IATA On/Off

A25ENA1.
On

A25ENA0.
*** Off**

Straight 2 of 5 IATA Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

A25MIN.
Minimum Message Length

A25MAX.
Maximum Message Length

Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>

X25DFT.

Matrix 2 of 5 On/Off

X25ENA1.

On

X25ENA0.

*** Off**

Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

X25MIN.

Minimum Message Length

X25MAX.

Maximum Message Length

Code 11

<Default All Settings>

C11DFT.

Code 11 On/Off

C11ENA1.

On

C11ENA0.

*** Off**

Code 11 Check Digits Required

This option sets whether 1 or 2 check digits are required with Code 11 bar codes. *Default = Two Check Digits.*

C11CK20.

One Check Digit

C11CK21.

*** Two Check Digits**

Code 11 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

C11MIN.

Minimum Message Length

C11MAX.

Maximum Message Length

Code 128

<Default All Code 128 Settings>

128DFT.

Code 128 On/Off

128ENA1.

*** On**

128ENA0.

Off

ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its space-efficient design, 3) a variation of Code 128

that supports concatenation of neighboring symbols, and 4) the standard layout for bar codes on a blood product label. Use the bar codes below to turn concatenation on or off. *Default =Off.*

ISBENA1.

On

ISBENA0.

*** Off**

Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

128MIN.

Minimum Message Length

128MAX.

Maximum Message Length

Code 128 Append

This function allows the scanner to append the data from several Code 128 bar codes together before transmitting them to the host computer. When the scanner encounters a Code 128 bar code with the append trigger character(s), it buffers Code 128 bar codes until it reads a Code 128 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). *Default = Off.*

128APP1.

On

128APP0.

*** Off**

Code 128 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-10), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

128DCP.

Code 128 Code Page

GS1-128

<Default All GS1-128 Settings>

GS1DFT.

GS1-128 On/Off

GS1ENA1.

*** On**

GS1ENA0.

Off

GS1-128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 1, Maximum Default = 80.

GS1MIN.

Minimum Message Length

GS1MAX.

Maximum Message Length

Telepen

<Default All Telepen Settings>

TELDFT.

Telepen On/Off

TELENA1.

On

TELENA0.

*** Off**

Telepen Output

Using AIM Telepen Output, the scanner reads symbols with start/stop pattern 1 and decodes them as standard full ASCII (start/stop pattern 1). When Original Telepen Output is selected, the scanner reads symbols with start/stop pattern 1 and decodes them as compressed numeric with optional full ASCII (start/stop pattern 2). *Default = AIM Telepen Output.*

TELOLD0.

*** AIM Telepen Output**

TELOLD1.

Original Telepen Output

Telepen Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-60. Minimum Default = 1, Maximum Default = 60.

TELMIN.

Minimum Message Length

TELMAX.

Maximum Message Length

UPC-A

<Default All UPC-A Settings>

UPADFT.

UPC-A On/Off

UPAENA1.

*** On**

UPAENA0.

Off

*Note: When **UPC-A Off** is scanned, UPC-A bar codes are transmitted as EAN-13.*

UPC-A Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On*.

UPACKX1.

*** On**

UPACKX0.

Off

UPC-A Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. *Default = On.*

UPANSX1.

*** On**

UPANSX0.

Off

UPC-A Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-A data. *Default = Off for both 2 Digit and 5 Digit Addenda.*

UPAAD21.

2 Digit Addenda On

UPAAD20.

*** 2 Digit Addenda Off**

UPAAD51.

5 Digit Addenda On

UPAAD50.

*** 5 Digit Addenda Off**

UPC-A Addenda Required

When ***Required*** is scanned, the scanner will only read UPC-A bar codes that have addenda. You must then turn on a 2 or 5 digit addenda listed on page 6-26. *Default = Not Required.*

UPAARQ1.

Required

UPAARQ0.

*** Not Required**

UPC-A Addenda Separator

When this feature is on, there is a space between the data from the bar code and the data from the addenda. When turned off, there is no space. *Default = On.*

UPAADS1.

*** On**

UPAADS0.

Off

UPC-A/EAN-13 with Extended Coupon Code

Use the following codes to enable or disable UPC-A **and** EAN-13 with Extended Coupon Code. When left on the default setting (**Off**), the scanner treats Coupon Codes and Extended Coupon Codes as single bar codes.

If you scan the **Allow Concatenation** code, when the scanner sees the coupon code and the extended coupon code in a single scan, it transmits both as separate symbologies. Otherwise, it transmits the first coupon code it reads.

If you scan the **Require Concatenation** code, the scanner must see and read the coupon code and extended coupon code in a single read to transmit the data. No data is output unless both codes are read.

Default = Off.

CPNENA0.

*** Off**

CPNENA1.

Allow Concatenation

CPNENA2.

Require Concatenation

Coupon GS1 DataBar Output

If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. Scan the **GS1 Output On** code below to scan and output only the GS1 DataBar code data. *Default = GS1 Output Off.*

CPNGS10.

*** GS1 Output Off**

CPNGS11.

GS1 Output On

UPC-E0

<Default All UPC-E Settings>

UPEDFT.

UPC-E0 On/Off

Most U.P.C. bar codes lead with the 0 number system. To read these codes, use the **UPC-E0 On** selection. If you need to read codes that lead with the 1 number system, use UPC-E1 (page 6-32). *Default = On.*

UPEEN01.

*** UPC-E0 On**

UPEEN00.

UPC-E0 Off

UPC-E0 Expand

UPC-E Expand expands the UPC-E code to the 12 digit, UPC-A format. *Default = Off.*

UPEEXP1.

On

UPEEXP0.

*** Off**

UPC-E0 Addenda Required

When **Required** is scanned, the scanner will only read UPC-E bar codes that have addenda. *Default = Not Required.*

UPEARQ1.

Required

UPEARQ0.

*** Not Required**

UPC-E0 Addenda Separator

When this feature is **On**, there is a space between the data from the bar code and the data from the addenda. When turned **Off**, there is no space. *Default = On.*

UPEADS1.

*** On**

UPEADS0.

Off

UPC-E0 Check Digit

Check Digit specifies whether the check digit should be transmitted at the end of the scanned data or not. *Default = On.*

UPECKX1.

*** On**

UPECKX0.

Off

UPC-E0 Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. To prevent transmission, scan **Off**. *Default = On.*

UPENSX1.

*** On**

UPENSX0.

Off

UPC-E0 Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-E data. *Default = Off for both 2 Digit and 5 Digit Addenda.*

UPEAD21.

2 Digit Addenda On

UPEAD20.

*** 2 Digit Addenda Off**

UPEAD51.

5 Digit Addenda On

UPEAD50.

*** 5 Digit Addenda Off**

UPC-E1

Most U.P.C. bar codes lead with the 0 number system. For these codes, use UPC-E0 (page 6-29). If you need to read codes that lead with the 1 number system, use the **UPC-E1 On** selection. *Default = Off.*

UPEEN11.
UPC-E1 On

UPEEN10.
*** UPC-E1 Off**

EAN/JAN-13

<Default All EAN/JAN Settings>

E13DFT.

EAN/JAN-13 On/Off

E13ENA1.
*** On**

E13ENA0.
Off

Note: If you want to convert UPC-A bar codes to EAN-13 format, scan the ***UPC-A Off*** *bar code on page 6-25.*

EAN/JAN-13 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On.*

E13CKX1.
*** On**

E13CKX0.
Off

EAN/JAN-13 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-13 data. *Default = Off for both 2 Digit and 5 Digit Addenda.*

E13AD21.
2 Digit Addenda On

E13AD20.
*** 2 Digit Addenda Off**

E13AD51.
5 Digit Addenda On

E13AD50.
*** 5 Digit Addenda Off**

EAN/JAN-13 Addenda Required

When **Required** is scanned, the scanner will only read EAN/JAN-13 bar codes that have addenda. *Default = Not Required.*

E13ARQ1.
Required

E13ARQ0.
*** Not Required**

EAN/JAN-13 Addenda Separator

When this feature is **On**, there is a space between the data from the bar code and the data from the addenda. When turned **Off**, there is no space. *Default = On.*

E13ADS1.

*** On**

E13ADS0.

Off

Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to *UPC-A/EAN-13 with Extended Coupon Code (page 6-27).*

ISBN Translate

When **On** is scanned, EAN-13 Bookland symbols are translated into their equivalent ISBN number format. *Default = Off.*

E13ISB1.

On

E13ISB0.

*** Off**

EAN/JAN-8

<Default All EAN/JAN-8 Settings>

EA8DFT.

EAN/JAN-8 On/Off

EA8ENA1.
*** On**

EA8ENA0.
Off

EAN/JAN-8 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On.*

EA8CKX1.
*** On**

EA8CKX0.
Off

EAN/JAN-8 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-8 data. *Default = Off for both 2 Digit and 5 Digit Addenda.*

EA8AD21.

2 Digit Addenda On

EA8AD20.

*** 2 Digit Addenda Off**

EA8AD51.

5 Digit Addenda On

EA8AD50.

*** 5 Digit Addenda Off**

EAN/JAN-8 Addenda Required

When **Required** is scanned, the scanner will only read EAN/JAN-8 bar codes that have addenda. *Default = Not Required.*

EA8ARQ1.

Required

EA8ARQ0.

*** Not Required**

EAN/JAN-8 Addenda Separator

When this feature is **On**, there is a space between the data from the bar code and the data from the addenda. When turned **Off**, there is no space. *Default = On.*

EA8ADS1.

*** On**

EA8ADS0.

Off

MSI

<Default All MSI Settings>

MSIDFT.

MSI On/Off

MSIENA1.

On

MSIENA0.

*** Off**

MSI Check Character

Different types of check characters are used with MSI bar codes. You can program the scanner to read MSI bar codes with Type 10 check characters. *Default = Validate Type 10, but Don't Transmit.*

When Check Character is set to **Validate Type 10/11 and Transmit**, the scanner will only read MSI bar codes printed with the specified type check character(s), and will transmit the character(s) at the end of the scanned data.

When Check Character is set to **Validate Type 10/11, but Don't Transmit**, the unit will only read MSI bar codes printed with the specified type check character(s), but will not transmit the check character(s) with the scanned data.

MSICHK0.

*** Validate Type 10, but Don't Transmit**

MSICHK1.

Validate Type 10 and Transmit

MSICHK2.

Validate 2 Type 10 Characters, but Don't Transmit

MSICHK3.

Validate 2 Type 10 Characters and Transmit

MSICHK4.

Validate Type 11 then Type 10 Character, but Don't Transmit

MSICHK5.

Validate Type 11 then Type 10 Character and Transmit

MSICHK6.

Disable MSI Check Characters

MSI Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.

MSIMIN.

Minimum Message Length

MSIMAX.

Maximum Message Length

GS1 DataBar Omnidirectional

< Default All GS1 DataBar Omnidirectional Settings >

RSSDFT.

GS1 DataBar Omnidirectional On/Off

RSSENA1.

*** On**

RSSENA0.

Off

GS1 DataBar Limited

< Default All GS1 DataBar Limited Settings >

RSLDFT.

GS1 DataBar Limited On/Off

RSLENA1.

*** On**

RSLENA0.

Off

GS1 DataBar Expanded

< Default All GS1 DataBar Expanded Settings >

RSEDFT.

GS1 DataBar Expanded On/Off

RSEENA1.

*** On**

RSEENA0.

Off

GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.

RSEMIN.

Minimum Message Length

RSEMAX.

Maximum Message Length

Codablock A

<Default All Codablock A Settings>

CBADFT.

Codablock A On/Off

CBAENA1.

On

CBAENA0.

*** Off**

Codablock A Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-600. Minimum Default = 1, Maximum Default = 600.

CBAMIN.

Minimum Message Length

CBAMAX.

Maximum Message Length

Codablock F

<Default All Codablock F Settings>

CBFDFT.

Codablock F On/Off

CBFENA1.

On

CBFENA0.

*** Off**

Codablock F Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.

CBFMIN.

Minimum Message Length

CBFMAX.

Maximum Message Length

PDF417

< Default All PDF417 Settings >

PDFDFT.

PDF417 On/Off

PDFENA1.

*** On**

PDFENA0.

Off

PDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-2750. Minimum Default = 1, Maximum Default = 2750.

PDFMIN.

Minimum Message Length

PDFMAX.

Maximum Message Length

MacroPDF417

MacroPDF417 is an implementation of PDF417 capable of encoding very large amounts of data into multiple PDF417 bar codes. When this selection is enabled, these multiple bar codes are assembled into a single data string. *Default = On.*

PDFMAC1.
*** On**

PDFMAC0.
Off

MicroPDF417

< Default All MicroPDF417 Settings >

MPDDFT.

MicroPDF417 On/Off

MPDENA1.
On

MPDENA0.
*** Off**

MicroPDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-366. Minimum Default = 1, Maximum Default = 366.

MPDMIN.

Minimum Message Length

MPDMAX.

Maximum Message Length

GS1 Composite Codes

Linear codes are combined with a unique 2D composite component to form a new class called GS1 Composite symbology. GS1 Composite symbologies allow for the co-existence of symbologies already in use. *Default = Off.*

COMENA1.

On

COMENA0.

*** Off**

UPC/EAN Version

Scan the ***UPC/EAN Version On*** bar code to decode GS1 Composite symbols that have a U.P.C. or an EAN linear component. (This does not affect GS1 Composite symbols with a GS1-128 or GS1 linear component.) *Default = UPC/EAN Version Off.*

COMUPC1.

UPC/EAN Version On

COMUPC0.

*** UPC/EAN Version Off**

Note: If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. See Coupon GS1 DataBar Output (page 6-28) for further information.

GS1 Composite Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-2435. Minimum Default = 1, Maximum Default = 2435.

COMMIN.
Minimum Message Length

COMMAX.
Maximum Message Length

GS1 Emulation

The scanner can automatically format the output from any GS1 data carrier to emulate what would be encoded in an equivalent GS1-128 or GS1 DataBar symbol. GS1 data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, GS1-128, and GS1-128 DataBar and GS1 Composites. (Any application that accepts GS1 data can be simplified since it only needs to recognize one data carrier type.)

If **GS1-128 Emulation** is scanned, all retail codes (U.P.C., UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-128 AIM ID,]C1 (see Symbology Charts on page A-1).

If **GS1 DataBar Emulation** is scanned, all retail codes (U.P.C., UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-DataBar AIM ID,]e*m* (see Symbology Charts on page A-1).

If **GS1 Code Expansion Off** is scanned, retail code expansion is disabled, and UPC-E expansion is controlled by the UPC-E0 Expand (page 6-29) setting. If the AIM ID is enabled, the value will be the GS1-128 AIM ID,]C1 (see Symbology Charts on page A-1).

If **EAN8 to EAN13 Conversion** is scanned, all EAN8 bar codes are converted to EAN13 format.

Default = GS1 Emulation Off.

EANEMU1.

GS1-128 Emulation

EANEMU2.

GS1 DataBar Emulation

EANEMU3.

GS1 Code Expansion Off

EANEMU4.

EAN8 to EAN13 Conversion

EANEMU0.

*** GS1 Emulation Off**

TCIF Linked Code 39 (TLC39)

This code is a composite code since it has a Code 39 linear component and a MicroPDF417 stacked code component. All bar code readers are capable of reading the Code 39 linear component. The MicroPDF417 component can only be decoded if **TLC39 On** is selected. The linear component may be decoded as Code 39 even if TLC39 is off. *Default = Off.*

T39ENA1.

On

T39ENA0.

*** Off**

QR Code

< Default All QR Code Settings >

QRCDFT.

QR Code On/Off

This selection applies to both QR Code and Micro QR Code.

QRCENA1.
*** On**

QRCENA0.
Off

QR Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-7089. Minimum Default = 1, Maximum Default = 7089.

QRCMIN.
Minimum Message Length

QRCMAX.
Maximum Message Length

QR Code Append

This function allows the scanner to append the data from several QR Code bar codes together before transmitting them to the host computer. When the scanner encounters an QR Code bar code with the append trigger character(s), it buffers the number of QR Code bar codes determined by

information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. *Default = On.*

QRCAPP1.
*** On**

QRCAPP0.
Off

QR Code Page

QR Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-10), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

QRCDCP.
QR Code Page

Data Matrix

< Default All Data Matrix Settings >

IDMDFT.

Data Matrix On/Off

IDMENA1.

*** On**

IDMENA0.

Off

Data Matrix Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-3116. Minimum Default = 1, Maximum Default = 3116.

IDMMIN.

Minimum Message Length

IDMMAX.

Maximum Message Length

Data Matrix Append

This function allows the scanner to append the data from several Data Matrix bar codes together before transmitting them to the host computer. When the scanner encounters an Data Matrix bar code with the append trigger character(s), it buffers the number of Data Matrix bar codes deter-

mined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. *Default = On.*

IDMAPP1.

*** On**

IDMAPP0.

Off

Data Matrix Code Page

Data Matrix Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-10), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

IDMDCP.

Data Matrix Code Page

MaxiCode

< Default All MaxiCode Settings >

MAXDFT.

MaxiCode On/Off

MAXENA1.

On

MAXENA0.

*** Off**

MaxiCode Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-150. Minimum Default = 1, Maximum Default = 150.

MAXMIN.

Minimum Message Length

MAXMAX.

Maximum Message Length

Aztec Code

< Default All Aztec Code Settings >

AZTDFT.

Aztec Code On/Off

AZTENA1.

*** On**

AZTENA0.

Off

Aztec Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-3832. Minimum Default = 1, Maximum Default = 3832.

AZTMIN.

Minimum Message Length

AZTMAX.

Maximum Message Length

Aztec Append

This function allows the scanner to append the data from several Aztec bar codes together before transmitting them to the host computer. When the scanner encounters an Aztec bar code with the append trigger charac-

ter(s), it buffers the number of Aztec bar codes determined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. *Default = Off.*

AZTAPP1.

On

AZTAPP0.

*** Off**

Aztec Code Page

Aztec Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-10), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

AZTDCP.

Aztec Code Page

Chinese Sensible (Han Xin) Code

< Default All Han Xin Settings >

HX_DFT.

Han Xin Code On/Off

HX_ENA1.
On

HX_ENA0.
*** Off**

Han Xin Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 1-7833. Minimum Default = 1, Maximum Default = 7833.

HX_MIN.
Minimum Message Length

HX_MAX.
Maximum Message Length

Postal Codes - Linear

The following lists linear postal codes. Any combination of linear postal code selections can be active at a time.

China Post (Hong Kong 2 of 5)

<Default All China Post (Hong Kong 2 of 5) Settings>

CPCDFT.

China Post (Hong Kong 2 of 5) On/Off

CPCENA1.

On

CPCENA0.

*** Off**

China Post (Hong Kong 2 of 5) Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

CPCMIN.

Minimum Message Length

CPCMAX.

Maximum Message Length

Korea Post

<Default All Korea Post Settings>

KPCDFT.

Korea Post

KPCENA1.

On

KPCENA0.

*** Off**

Korea Post Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 6-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.

KPCMIN.

Minimum Message Length

KPCMAX.

Maximum Message Length

Korea Post Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data. *Default = Don't Transmit.*

KPCCHK1.

Transmit Check Digit

KPCCHK0.

*** Don't Transmit Check Digit**

Postal Codes - 2D

The following lists the possible 2D postal codes, and 2D postal code combinations that are allowed. Only one 2D postal code selection can be active at a time. If you scan a second 2D postal code selection, the first selection is overwritten. *Default = 2D Postal Codes Off.*

POSTAL0.

*** 2D Postal Codes Off**

Single 2D Postal Codes:

POSTAL1.

Australian Post On

POSTAL7.

British Post On

POSTAL30.

Canadian Post On

POSTAL10.

Intelligent Mail Bar Code On

POSTAL3.

Japanese Post On

POSTAL4.

KIX Post On

POSTAL5.

Planet Code On

Also see Planet Code Check Digit, page 6-62.

POSTAL9.

Postal-4i On

POSTAL6.

Postnet On

Also see Postnet Check Digit, page 6-62.

POSTAL11.

Postnet with B and B' Fields On

POSTAL2.

InfoMail On

Combination 2D Postal Codes:

POSTAL8.

InfoMail and British Post On

POSTAL20.

Intelligent Mail Bar Code and Postnet with B and B' Fields On

POSTAL14.

Postnet and
Postal-4i On

POSTAL16.

Postnet and
Intelligent Mail Bar Code On

POSTAL17.

Postal-4i and
Intelligent Mail Bar Code On

POSTAL19.

Postal-4i and
Postnet with B and B' Fields On

POSTAL12.

Planet Code and
Postnet On

POSTAL18.

Planet Code and
Postnet with B and B' Fields On

POSTAL13.

Planet Code and
Postal-4i On

POSTAL15.

Planet Code and
Intelligent Mail Bar Code On

POSTAL21.

Planet Code,
Postnet, and
Postal-4i On

POSTAL22.

Planet Code,
Postnet, and
Intelligent Mail Bar Code On

POSTAL23.

Planet Code,
Postal-4i, and
Intelligent Mail Bar Code On

POSTAL24.

Postnet,
Postal-4i, and
Intelligent Mail Bar Code On

POSTAL25.

Planet Code,
Postal-4i, and
Postnet with B and B' Fields On

POSTAL26.

Planet Code,
Intelligent Mail Bar Code, and
Postnet with B and B' Fields On

POSTAL27.

Postal-4i,
Intelligent Mail Bar Code, and
Postnet with B and B' Fields On

POSTAL28.

Planet Code,
Postal-4i,
Intelligent Mail Bar Code, and
Postnet On

POSTAL29.

Planet Code,
Postal-4i,
Intelligent Mail Bar Code, and
Postnet with B and B' Fields On

Planet Code Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of Planet Code data. *Default = Don't Transmit.*

PLNCKX1.

Transmit Check Digit

PLNCKX0.

*** Don't Transmit Check Digit**

Postnet Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of Postnet data. *Default = Don't Transmit.*

NETCKX1.

Transmit Check Digit

NETCKX0.

*** Don't Transmit Check Digit**

Australian Post Interpretation

This option controls what interpretation is applied to customer fields in Australian 4-State symbols.

Bar Output lists the bar patterns in "0123" format.

Numeric N Table causes that field to be interpreted as numeric data using the N Table.

Alphanumeric C Table causes the field to be interpreted as alphanumeric data using the C Table. Refer to the Australian Post Specification Tables.

Combination C and N Tables causes the field to be interpreted using either the C or N Tables.

AUSINT0.

*** Bar Output**

AUSINT1.

Numeric N Table

AUSINT2.

Alphanumeric C Table

AUSINT3.

Combination C and N Tables

7 Interface Keys

Keyboard Function Relationships

The following Keyboard Function Code, Hex/ASCII Value, and Full ASCII “CTRL”+ relationships apply to all terminals that can be used with the scanner. Refer to page 2-18 enable Control + ASCII mode.

Function Code	HEX/ASCII Value	Full ASCII “CTRL” +
NUL	00	@
SOH	01	A
STX	02	B
ETX	03	C
EOT	04	D
ENQ	05	E
ACK	06	F
BEL	07	G
BS	08	H
HT	09	I
LF	0A	J
VT	0B	K
FF	0C	L
CR	0D	M
SO	0E	N
SI	0F	O
DLE	10	P
DC1	11	Q
DC2	12	R
DC3	13	S
DC4	14	T
NAK	15	U
SYN	16	V
ETB	17	W
CAN	18	X
EM	19	Y
SUB	1A	Z
ESC	1B	[
FS	1C	\
GS	1D	]
RS	1E	^
US	1F	_

The last five characters in the Full ASCII "CTRL"+ column ([\ ] 6 -), apply to US only. The following chart indicates the equivalents of these five characters for different countries.

Country			**Codes**		
United States	[	\	]	6	-
Belgium	[	<	]	6	-
Scandinavia	8	<	9	6	-
France	^	8	$	6	=
Germany		Ã	+	6	-
Italy		\	+	6	-
Switzerland		<	. .	6	-
United Kingdom	[	¢	]	6	-
Denmark	8	\	9	6	-
Norway	8	\	9	6	-
Spain	[	\	]	6	-

Supported Interface Keys

ASCII	HEX	IBM PC/AT and Compatibles, USB PC Keyboard	Apple Mac/iMac Supported Keys
NUL	00	Reserved	Reserved
SOH	01	Enter (KP)	Enter/Numpad Enter
STX	02	Cap Lock	CAPS
ETX	03	ALT make	ALT make
EOT	04	ALT break	ALT break
ENQ	05	CTRL make	CNTRL make
ACK	06	CTRL break	CNTRL break
BEL	07	CR/Enter	RETURN
BS	08	Reserved	APPLE make
HT	09	Tab	TAB
LF	0A	Reserved	APPLE break
VT	0B	Tab	TAB
FF	0C	Delete	Del
CR	0D	CR/Enter	RETURN
SO	0E	Insert	Ins Help
SI	0F	Escape	ESC
DLE	10	F11	F11
DC1	11	Home	Home
DC2	12	Print	Prnt Scrn
DC3	13	Back Space	BACKSPACE
DC4	14	Back Tab	LSHIFT TAB
NAK	15	F12	F12
SYN	16	F1	F1
ETB	17	F2	F2
CAN	18	F3	F3
EM	19	F4	F4
SUB	1A	F5	F5
ESC	1B	F6	F6
FS	1C	F7	F7
GS	1D	F8	F8
RS	1E	F9	F9
US	1F	F10	F10
DEL	7F		BACKSPACE

8

Utilities

To Add a Test Code I.D. Prefix to All Symbologies

This selection allows you to turn on transmission of a Code I.D. before the decoded symbology. (See the Symbology Charts, beginning on page A-1) for the single character code that identifies each symbology.) This action first clears all current prefixes, then programs a Code I.D. prefix for all symbologies. This is a temporary setting that will be removed when the unit is power cycled.

PRECA2,BK2995C80!

Add Code I.D. Prefix to All Symbologies (Temporary)

Show Decoder Revision

Scan the bar code below to output the decoder revision.

REV_DR.

Show Decoder Revision

Show Scan Driver Revision

Scan the bar code below to output the scan driver revision. The scan driver controls image capture.

REV_SD.

Show Scan Driver Revision

Show Software Revision

Scan the bar code below to output the current software revision, unit serial number, and other product information.

REVINF.

Show Revision

Show Data Format

Scan the bar code below to show current data format settings.

DFMBK3?.

Data Format Settings

Test Menu

When you scan the Test Menu **On** code, then scan a programming code in this manual, the scanner displays the content of a programming code. The programming function will still occur, but in addition, the content of that programming code is output to the terminal.

Note: This feature should not be used during normal scanner operation.

TSTMNU1.

On

TSTMNU0.

*** Off**

EZConfig-Scanning Introduction

EZConfig-Scanning provides a wide range of PC-based programming functions that can be performed on a scanner connected to your PC's COM port. EZConfig-Scanning allows you to download upgrades to the scanner's firmware, change programmed parameters, and create and print programming bar codes. Using EZConfig-Scanning, you can even save/open the programming parameters for a scanner. This saved file can be e-mailed or, if required, you can create a single bar code that contains all the customized programming parameters and mail or fax that bar code to any location. Users in other locations can scan the bar code to load in the customized programming.

To communicate with a scanner, EZConfig-Scanning requires that the PC have at least one available serial communication port, or a serial port emulation using a physical USB port. If you are using the serial port and RS232 cable, an external power supply is required. When using a USB serial port emulation, only a USB cable is required.

EZConfig-Scanning Operations

The EZConfig-Scanning software performs the following operations:

Scan Data

Scan Data allows you to scan bar codes and display the bar code data in a window. Scan Data lets you send serial commands to the scanner and receive scanner response that can be seen in the Scan Data window. The data displayed in the Scan Data window can either be saved in a file or printed.

Configure

Configure displays the programming and configuration data of the scanner. The scanner's programming and configuration data is grouped into different categories. Each category is displayed as a tree item under the "Configure" tree node in the application explorer. When one of these tree nodes is clicked, the right-hand side is loaded with the parameters' form belonging to that particular category. The "Configure" tree option has all the programming and configuration parameters specified for a scanner. You can set or modify these parameters as required. You can later write the modified settings to the scanner, or save them to a dcf file.

Installing EZConfig-Scanning from the Web

Note: EZConfig-Scanning requires .NET software. If .NET is not installed on your PC, you will be prompted to install it during the EZConfig-Scanning installation.

1. Access the Honeywell web site at www.honeywellaidc.com.
2. Click on the **Resources** tab. Select **Software**.
3. Click on the dropdown for **Select Product Number**. Click on **1400**.
4. Click on the listing for **EZConfig-Scanning**.
5. When prompted, select **Save File**, and save the files to the **c:\windows\temp** directory.
6. Once you have finished downloading the file, exit the web site.
7. Using Explorer, go to the **c:\windows\temp** file.
8. Double click on the **Setup.exe** file. Follow the screen prompts to install the EZConfig-Scanning program.
9. If you've selected the defaults during installation, you can click on **Start Menu-All Programs-Honeywell-EZConfig-Scanning**.

Resetting the Factory Defaults

This selection erases all your settings and resets the scanner to the original factory defaults. It also disables all plugins.

If you aren't sure what programming options are in your scanner, or you've changed some options and want to restore the scanner to factory default settings, first scan the **Remove Custom Defaults** bar code, then scan **Activate Defaults**. This resets the scanner to the factory default settings.

DEFOVR.

Remove Custom Defaults

DEFALT.

Activate Defaults

The Menu Commands, beginning on page 9-5 list the factory default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

9 Serial Programming Commands

The serial programming commands can be used in place of the programming bar codes. Both the serial commands and the programming bar codes will program the scanner. For complete descriptions and examples of each serial programming command, refer to the corresponding programming bar code in this manual.

The device must be set to an RS232 interface (see page 2-2). The following commands can be sent via a PC COM port using terminal emulation software.

Conventions

The following conventions are used for menu and query command descriptions:

parameter	A label representing the actual value you should send as part of a command.
[*option*]	An optional part of a command.
{Data}	Alternatives in a command.
bold	Names of menus, menu commands, buttons, dialog boxes, and windows that appear on the screen.

Menu Command Syntax

Menu commands have the following syntax (spaces have been used for clarity only):

Prefix [:Name:] Tag SubTag {Data} [, SubTag {Data}] [; Tag SubTag {Data}] […] Storage

Prefix	Three ASCII characters: **SYN M CR** (ASCII 22,77,13).
:Name:	To send information to the scanner, use **:**Voyager**:** The default factory setting for a Voyager scanner is Voyager scanner. This setting is changed by using the BT_NAM command, which accepts alphanumeric values. If the name is not known, a wildcard (*) can be used :*:.
Tag	A 3 character case-insensitive field that identifies the desired menu command group. For example, all RS232 configuration settings are identified with a Tag of **232**.
SubTag	A 3 character case-insensitive field that identifies the desired menu command within the tag group. For example, the SubTag for the RS232 baud rate is **BAD**.
Data	The new value for a menu setting, identified by the Tag and SubTag.
Storage	A single character that specifies the storage table to which the command is applied. An exclamation point (**!**) performs the command's operation on the device's volatile menu configuration table. A period (**.**) performs the command's operation on the device's non-volatile menu configuration table. Use the non-volatile table only for semi-permanent changes you want saved through a power cycle.

Query Commands

Several special characters can be used to query the device about its settings.

^ What is the default value for the setting(s).

? What is the device's current value for the setting(s).

***** What is the range of possible values for the setting(s). (The device's response uses a dash (**-**) to indicate a continuous range of values. A pipe (**|**) separates items in a list of non-continuous values.)

:Name: Field Usage (Optional)

This command returns the query information from the scanner.

Tag Field Usage

When a query is used in place of a Tag field, the query applies to the *entire* set of commands available for the particular storage table indicated by the Storage field of the command. In this case, the SubTag and Data fields should not be used because they are ignored by the device.

SubTag Field Usage

When a query is used in place of a SubTag field, the query applies only to the subset of commands available that match the Tag field. In this case, the Data field should not be used because it is ignored by the device.

Data Field Usage

When a query is used in place of the Data field, the query applies only to the specific command identified by the Tag and SubTag fields.

Concatenation of Multiple Commands

Multiple commands can be issued within one Prefix/Storage sequence. Only the Tag, SubTag, and Data fields must be repeated for each command in the sequence. If additional commands are to be applied to the same Tag, then the new command sequence is separated with a comma (**,**) and only the SubTag and Data fields of the additional command are issued. If the additional command requires a different Tag field, the command is separated from previous commands by a semicolon (**;**).

Responses

The device responds to serial commands with one of three responses:

ACK Indicates a good command which has been processed.

ENQ Indicates an invalid Tag or SubTag command.

NAK Indicates the command was good, but the Data field entry was out of the allowable range for this Tag and SubTag combination, e.g., an entry for a minimum message length of 100 when the field will only accept 2 characters.

When responding, the device echoes back the command sequence with the status character inserted directly before each of the punctuation marks (the period, exclamation point, comma, or semicolon) in the command.

Examples of Query Commands

In the following examples, a bracketed notation [ ] depicts a non-displayable response.

Example: What is the range of possible values for Codabar Coding Enable?

Enter: **cbrena*.**

Response: **CBRENA0-1[ACK]**

This response indicates that Codabar Coding Enable (CBRENA) has a range of values from 0 to 1 (off and on).

Example: What is the default value for Codabar Coding Enable?

Enter: **cbrena^.**

Response: **CBRENA1[ACK]**

This response indicates that the default setting for Codabar Coding Enable (CBRENA) is 1, or on.

Example: What is the device's current setting for Codabar Coding Enable?

Enter: **cbrena?.**

Response: **CBRENA1[ACK]**

This response indicates that the device's Codabar Coding Enable (CBRENA) is set to 1, or on.

Example: What are the device's settings for all Codabar selections?

Enter: **cbr?.**

Response: **CBRENA1[ACK],**
SSX0[ACK],
CK20[ACK],
CCT1[ACK],
MIN2[ACK],
MAX60[ACK],
DFT[ACK].

This response indicates that the device's Codabar Coding Enable (CBRENA) is set to 1, or on;
the Start/Stop Character (SSX) is set to 0, or Don't Transmit;
the Check Character (CK2) is set to 0, or Not Required;
concatenation (CCT) is set to 1, or Enabled;

the Minimum Message Length (MIN) is set to 2 characters;
the Maximum Message Length (MAX) is set to 60 characters;
and the Default setting (DFT) has no value.

Resetting the Custom Defaults

If you want the custom default settings restored to your scanner, scan the **Activate Custom Defaults** bar code below. This resets the scanner to the custom default settings. If there are no custom defaults, it will reset the scanner to the factory default settings. Any settings that have not been specified through the custom defaults will be defaulted to the factory default settings.

DEFALT.

Activate Custom Defaults

The charts on the following pages list the factory default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

Menu Commands

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Product Default Settings			
Setting Custom Defaults	Set Custom Defaults	MNUCDP	1-7
	Save Custom Defaults	MNUCDS	1-7
Resetting the Custom Defaults	Activate Custom Defaults	DEFALT	1-7
Programming the Interface			
Plug and Play Codes	Keyboard Wedge: IBM PC AT and Compatibles with CR suffix	PAP_AT	2-1
	Laptop Direct Connect with CR suffix	PAPLTD	2-1
	RS232 Serial Port	PAP232	2-2
Plug and Play Codes: RS485	IBM Port 5B Interface	PAPP5B	2-2
	IBM Port 9B HHBCR-1 Interface	PAP9B1	2-2
	IBM Port 17 Interface	PAPP17	2-2
	IBM Port 9B HHBCR-2 Interface	PAP9B2	2-2
	RS485 Packet Mode On	RTLPDF1	2-3
	*RS485 Packet Mode Off	RTLPDF0	2-3
	RS485 Packet Length (20-256) *40	RTLMPS	2-3
Plug and Play Codes: IBM SurePos	USB IBM SurePos Handheld	PAPSPH	2-4
	USB IBM SurePos Tabletop	PAPSPT	2-4

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Plug and Play Codes: USB	USB Keyboard (PC)	PAP124	2-4
	USB Keyboard (Mac)	PAP125	2-4
	USB Japanese Keyboard (PC)	TRMUSB134	2-4
	USB HID	PAP131	2-5
	USB Serial	TRMUSB130	2-5
	CTS/RTS Emulation On	USBCTS1	2-5
	CTS/RTS Emulation Off*	USBCTS0	2-5
	ACK/NAK Mode On	USBACK1	2-5
	ACK/NAK Mode Off*	USBACK0	2-5
Plug and Play Codes	Verifone Ruby Terminal	PAPRBY	2-6
	Gilbarco Terminal	PAPGLB	2-6
	Honeywell Bioptic Aux Port	PAPBIO	2-7
	Datalogic Magellan Bioptic Aux Port	PAPMAG	2-7
	NCR Bioptic Aux Port	PAPNCR	2-7
	Wincor Nixdorf Terminal	PAPWNX	2-8
	Wincor Nixdorf Beetle	PAPBTL	2-8

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Program Keyboard Country	*U.S.A.	KBDCTY0	2-9
	Albania	KBDCTY35	2-9
	Azeri (Cyrillic)	KBDCTY81	2-9
	Azeri (Latin)	KBDCTY80	2-9
	Belarus	KBDCTY82	2-9
	Belgium	KBDCTY1	2-9
	Bosnia	KBDCTY33	2-9
	Brazil	KBDCTY16	2-9
	Brazil (MS)	KBDCTY59	2-10
	Bulgaria (Cyrillic)	KBDCTY52	2-10
	Bulgaria (Latin)	KBDCTY53	2-10
	Canada (French legacy)	KBDCTY54	2-10
	Canada (French)	KBDCTY18	2-10
	Canada (Multilingual)	KBDCTY55	2-10
	Croatia	KBDCTY32	2-10
	Czech	KBDCTY15	2-10

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Program Keyboard Country	Czech (Programmers)	KBDCTY40	2-10
	Czech (QWERTY)	KBDCTY39	2-10
	Czech (QWERTZ)	KBDCTY38	2-10
	Denmark	KBDCTY8	2-10
	Dutch (Netherlands)	KBDCTY11	2-10
	Estonia	KBDCTY41	2-11
	Faeroese	KBDCTY83	2-11
	Finland	KBDCTY2	2-11
	France	KBDCTY3	2-11
	Gaelic	KBDCTY84	2-11
	Germany	KBDCTY4	2-11
	Greek	KBDCTY17	2-11
	Greek (220 Latin)	KBDCTY64	2-11
	Greek (220)	KBDCTY61	2-11
	Greek (319 Latin)	KBDCTY65	2-11
	Greek (319)	KBDCTY62	2-11
	Greek (Latin)	KBDCTY63	2-11
	Greek (MS)	KBDCTY66	2-11
	Greek (Polytonic)	KBDCTY60	2-12
	Hebrew	KBDCTY12	2-12
	Hungarian (101 key)	KBDCTY50	2-12
	Hungary	KBDCTY19	2-12
	Iceland	KBDCTY75	2-12
	Irish	KBDCTY73	2-12
	Italian (142)	KBDCTY56	2-12
	Italy	KBDCTY5	2-12
	Japan ASCII	KBDCTY28	2-12
	Kazakh	KBDCTY78	2-12
	Kyrgyz (Cyrillic)	KBDCTY79	2-12
	Latin America	KBDCTY14	2-12
	Latvia	KBDCTY42	2-12

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Program Keyboard Country	Latvia (QWERTY)	KBDCTY43	2-13
	Lithuania	KBDCTY44	2-13
	Lithuania (IBM)	KBDCTY45	2-13
	Macedonia	KBDCTY34	2-13
	Malta	KBDCTY74	2-13
	Mongolian (Cyrillic)	KBDCTY86	2-13
	Norway	KBDCTY9	2-13
	Poland	KBDCTY20	2-13
	Polish (214)	KBDCTY57	2-13
	Polish (Programmers)	KBDCTY58	2-13
	Portugal	KBDCTY13	2-13
	Romania	KBDCTY25	2-13
	Russia	KBDCTY26	2-13
	Russian (MS)	KBDCTY67	2-14
	Russian (Typewriter)	KBDCTY68	2-14
	SCS	KBDCTY21	2-14
	Serbia (Cyrillic)	KBDCTY37	2-14
	Serbia (Latin)	KBDCTY36	2-14
	Slovakia	KBDCTY22	2-14
	Slovakia (QWERTY)	KBDCTY49	2-14
	Slovakia (QWERTZ)	KBDCTY48	2-14
	Slovenia	KBDCTY31	2-14
	Spain	KBDCTY10	2-14
	Spanish variation	KBDCTY51	2-14
	Sweden	KBDCTY23	2-14
	Switzerland (French)	KBDCTY29	2-14
	Switzerland (German)	KBDCTY6	2-15
	Tatar	KBDCTY85	2-15
	Turkey F	KBDCTY27	2-15
	Turkey Q	KBDCTY24	2-15

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Program Keyboard Country	Ukrainian	KBDCTY76	2-15
	United Kingdom	KBDCTY7	2-15
	United Stated (Dvorak right)	KBDCTY89	2-15
	United States (Dvorak left)	KBDCTY88	2-15
	United States (Dvorak)	KBDCTY87	2-15
	United States (International)	KBDCTY30	2-15
	Uzbek (Cyrillic)	KBDCTY77	2-15
Keyboard Conversion	*Keyboard Conversion Off	KBDCNV0	2-17
	Convert all Characters to Upper Case	KBDCNV1	2-17
	Convert all Characters to Lower Case	KBDCNV1	2-17
Keyboard Style	*Regular	KBDSTY0	2-16
	Caps Lock	KBDSTY1	2-16
	Shift Lock	KBDSTY2	2-16
	Automatic Caps Lock	KBDSTY6	2-16
	Emulate External Keyboard	KBDSTY5	2-17
Control Character Output	*Control Character Output Off	KBDNPE0	2-18
	*Control Character Output On	KBDNPE1	2-18

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Keyboard Modifiers	*Control + ASCII Off	KBDCAS0	2-18
	DOS Mode Control + ASCII	KBDCAS1	2-18
	Windows Mode Control + ASCII	KBDCAS2	2-18
	Windows Mode Prefix/Suffix Off	KBDCAS3	2-18
	*Turbo Mode Off	KBDTMD0	2-19
	Turbo Mode On	KBDTMD1	2-19
	*Numeric Keypad Off	KBDNPS0	2-19
	Numeric Keypad On	KBDNPS1	2-19
	*Auto Direct Connect Off	KBDADC0	2-19
	Auto Direct Connect On	KBDADC1	2-19
Baud Rate	300 BPS	232BAD0	2-20
	600 BPS	232BAD1	2-20
	1200 BPS	232BAD2	2-20
	2400 BPS	232BAD3	2-20
	4800 BPS	232BAD4	2-20
	*9600 BPS	232BAD5	2-20
	19200 BPS	232BAD6	2-20
	38400 BPS	232BAD7	2-20
	57600 BPS	232BAD8	2-20
	115200 BPS	232BAD9	2-20

Selection	Setting *** Indicates default***	Serial Command ***# Indicates a numeric entry***	Page
Word Length: Data Bits, Stop Bits, and Parity	7 Data, 1 Stop, Parity Even	232WRD3	2-21
	7 Data, 1 Stop, Parity None	232WRD0	2-21
	7 Data, 1 Stop, Parity Odd	232WRD6	2-21
	7 Data, 2 Stop, Parity Even	232WRD4	2-21
	7 Data, 2 Stop, Parity None	232WRD1	2-21
	7 Data, 2 Stop, Parity Odd	232WRD7	2-21
	8 Data, 1 Stop, Parity Even	232WRD5	2-21
	*8 Data, 1 Stop, Parity None	232WRD2	2-21
	8 Data, 1 Stop, Parity Odd	232WRD8	2-21
RS232 Receiver Time-out	Range 0 - 300 seconds	232LPT###	2-22
RS232 Handshaking	*RTS/CTS Off	232CTS0	2-22
	Flow Control, No Timeout	232CTS1	2-22
	Two-Direction Flow Control	232CTS2	2-22
	Flow Control with Timeout	232CTS3	2-22
	RS232 Timeout	232DEL####	2-23
	*XON/XOFF Off	232XON0	2-23
	XON/XOFF On	232XON1	2-23
	*ACK/NAK Off	232ACK0	2-24
	ACK/NAK On	232ACK1	2-24
Scanner-Bioptic Packet Mode	*Packet Mode Off	232PKT0	2-24
	Packet Mode On	232PKT2	2-24

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Scanner-Bioptic ACK/NAK Mode	*Bioptic ACK/NAK Off	232NAK0	2-25
	Bioptic ACK/NAK On	232NAK1	2-25
Scanner-Bioptic ACK/NAK Timeout	ACK/NAK Timeout *5100	232DLK#####	2-25
Input/Output Selections			
Power Up Beeper	Power Up Beeper Off - Scanner	BEPPWR0	3-1
	*Power Up Beeper On - Scanner	BEPPWR1	3-1
Beep on BEL Character	Beep on BEL On	BELBEP1	3-1
	*Beep on BEL Off	BELBEP0	3-1
Trigger Click	On	BEPTRG1	3-1
	*Off	BEPTRG0	3-1
Beeper - Good Read	Off	BEPBEP0	3-2
	*On	BEPBEP1	3-2
Beeper Volume - Good Read	Off	BEPLVL0	3-2
	Low	BEPLVL1	3-2
	Medium	BEPLVL2	3-2
	*High	BEPLVL3	3-2
Beeper Pitch - Good Read (Frequency)	Low (1600) (min 400Hz)	BEPFQ11600	3-3
	*Medium (2400)	BEPFQ12400	3-3
	High (4200) (max 9000Hz)	BEPFQ14200	3-3
Beeper Pitch - Error (Frequency)	*Razz (250) (min 200Hz)	BEPFQ2800	3-3
	Medium (3250)	BEPFQ23250	3-3
	High (4200) (max 9000Hz)	BEPFQ24200	3-3
Beeper Duration - Good Read	*Normal Beep	BEPBIP0	3-3
	Short Beep	BEPBIP1	3-3

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
LED - Good Read	Off	BEPLED0	3-4
	*On	BEPLED1	3-4
Number of Beeps - Error	*1	BEPERR3	3-4
	Range 1 - 9	BEPERR#	3-4
Number of Beeps - Good Read	*1	BEPRPT1	3-4
	Range 1 - 9	BEPRPT#	3-4
Good Read Delay	*No Delay	DLYGRD0	3-5
	Short Delay (500 ms)	DLYGRD500	3-5
	Medium Delay (1000 ms)	DLYGRD1000	3-5
	Long Delay (1500 ms)	DLYGRD1500	3-5
User-Specified Good Read Delay	Range 0 - 30,000 ms	DLYGRD#####	3-5
Manual Trigger Mode	*Manual Trigger - Normal	PAPHHF	3-5
LED Illumination - Manual Trigger	Low	PWRNOL7	3-6
	Medium	PWRNOL15	3-6
	Medium High	PWRNOL50	3-6
	*High	PWRNOL150	3-6
In-Stand Sensor Mode	*Sensor On	TRGSSW1	3-6
	Sensor Off	TRGSSW0	3-6
Presentation	Presentation Mode	PAPPST	3-7
Idle Illumination - Presentation Mode	Low	PWRIDL7	3-7
	Medium	PWRIDL15	3-7
	*High	PWRIDL50	3-7
Presentation Sensitivity	Range 0-20 (*1)	TRGPMS##	3-7

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Presentation Centering Window	Presentation Centering On	PDCWIN1	3-9
	*Presentation Centering Off	PDCWIN0	3-9
	Left of Presentation Centering Window (*40%)	PDCLFT###	3-9
	Right of Presentation Centering Window (*60%)	PDCRGT###	3-9
	Top of Presentation Centering Window (*40%)	PDCTOP###	3-9
	Bottom of Presentation Centering Window (*60%)	PDCBOT###	3-9
CodeGate	*CodeGate Off Out-of-Stand	AOSCGD0.	3-9
	CodeGate On Out-of-Stand	AOSCGD1.	3-9
Mobile Phone Read Mode	Hand Held Scanning - Mobile Phone	PAPHHC	3-10
	Presentation Scanning - Mobile Phone	PAPPSC	3-10
Hands Free Time-Out	Range 0 - 300,000 ms	TRGPTO######	3-10
Reread Delay	Short (500 ms)	DLYRRD500	3-11
	*Medium (750 ms)	DLYRRD750	3-11
	Long (1000 ms)	DLYRRD1000	3-11
	Extra Long (2000 ms)	DLYRRD2000	3-10
User-Specified Reread Delay	Range 0 - 30,000 ms	DLYRRD#####	3-11

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Centering Window	Centering On	DECWIN1	3-13
	*Centering Off	DECWIN0	3-13
	Left of Centering Window (*40%)	DECLFT###	3-13
	Right of Centering Window (*60%)	DECRGT###	3-13
	Top of Centering Window (*40%)	DECTOP###	3-13
	Bottom of Centering Window (*60%)	DECBOT###	3-13
No Read	On	SHWNRD1	3-13
	*Off	SHWNRD0	3-13
Video Reverse	Video Reverse Only	VIDREV1	3-14
	Video Reverse and Standard Bar Codes	VIDREV2	3-14
	*Video Reverse Off	VIDREV0	3-14
Working Orientation	*Upright	ROTATN0	3-15
	Vertical, Bottom to Top (Rotate CCW 90°)	ROTATN1	3-15
	Upside Down	ROTATN2	3-15
	Vertical, Top to Bottom (Rotate CW 90°)	ROTATN3	3-15
Prefix/Suffix Selections			
Add CR Suffix to All Symbologies		VSUFCR	4-3
Prefix	Add Prefix	PREBK2##	4-3
	Clear One Prefix	PRECL2	4-3
	Clear All Prefixes	PRECA2	4-3
Suffix	Add Suffix	SUFBK2##	4-4
	Clear One Suffix	SUFCL2	4-4
	Clear All Suffixes	SUFCA2	4-4

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Function Code Transmit	*Enable	RMVFNC0	4-4
	Disable	RMVFNC1	4-4
Intercharacter Delay	Range 0 - 1000 (5ms increments)	DLYCHR##	4-5
User Specified Intercharacter Delay	Delay Length 0 - 1000 (5ms increments)	DLYCRX##	4-5
	Character to Trigger Delay	DLY_XX##	4-5
Interfunction Delay	Range 0 - 1000 (5ms increments)	DLYFNC##	4-6
Intermessage Delay	Range 0 - 1000 (5ms increments)	DLYMSG##	4-6
Data Formatter Selections			
Data Format Editor	*Default Data Format (None)	DFMDF3	5-1
	Enter Data Format	DFMBK3##	5-2
	Clear One Data Format	DFMCL3	5-3
	Clear All Data Formats	DFMCA3	5-3
Data Formatter	Data Formatter Off	DFM_EN0	5-7
	*Data Formatter On, Not Required, Keep Prefix/Suffix	DFM_EN1	5-8
	Data Format Required, Keep Prefix/Suffix	DFM_EN2	5-8
Primary/Alternate Data Formats	Primary Data Format	ALTFNM0	5-8
	Data Format 1	ALTFNM1	5-8
	Data Format 2	ALTFNM2	5-8
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Selection	Setting *** Indicates default***	Serial Command ***# Indicates a numeric entry***	Page
Symbologies			
All Symbologies	All Symbologies Off	ALLENA0	6-2
	All Symbologies On	ALLENA1	6-2
Codabar	Default All Codabar Settings	CBRDFT	6-3
	Off	CBRENA0	6-3
	*On	CBRENA1	6-3
Codabar Start/Stop Char.	*Don't Transmit	CBRSSX0	6-3
	Transmit	CBRSSX1	6-3
Codabar Check Char.	*No Check Char.	CBRCK20	6-4
	Validate, But Don't Transmit	CBRCK21	6-4
	Validate, and Transmit	CBRCK22	6-4
Codabar Concatenation	*Off	CBRCCT0	6-4
	On	CBRCCT1	6-4
	Require	CBRCCT2	6-4
Codabar Message Length	Minimum (2 - 60) *4	CBRMIN##	6-5
	Maximum (2 - 60) *60	CBRMAX##	6-5
Code 39	Default All Code 39 Settings	C39DFT	6-6
	Off	C39ENA0	6-6
	*On	C39ENA1	6-6
Code 39 Start/Stop Char.	*Don't Transmit	C39SSX0	6-6
	Transmit	C39SSX1	6-6
Code 39 Check Char.	*No Check Char.	C39CK20	6-7
	Validate, But Don't Transmit	C39CK21	6-7
	Validate, and Transmit	C39CK22	6-7

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Code 39 Message Length	Minimum (0 - 48) *0	C39MIN##	6-7
	Maximum (0 - 48) *48	C39MAX##	6-7
Code 39 Append	*Off	C39APP0	6-8
	On	C39APP1	6-8
Code 32 Pharmaceutical (PARAF)	*Off	C39B320	6-8
	On	C39B321	6-8
Code 39 Full ASCII	*Off	C39ASC0	6-9
	On	C39ASC1	6-9
	Code 39 Code Page	C39DCP	6-10
Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT	6-10
	Off	I25ENA0	6-10
	*On	I25ENA1	6-10
Interleaved 2 of 5 Check Digit	*No Check Char.	I25CK20	6-11
	Validate, But Don't Transmit	I25CK21	6-11
	Validate, and Transmit	I25CK22	6-11
Interleaved 2 of 5 Message Length	Minimum (2 - 80) *4	I25MIN##	6-11
	Maximum (2 - 80) *80	I25MAX##	6-11
NEC 2 of 5	Default All NEC 2 of 5 Settings	N25DFT	6-12
	Off	N25ENA0	6-12
	*On	N25ENA1	6-12
NEC 2 of 5 Check Digit	*No Check Char.	N25CK20	6-12
	Validate, But Don't Transmit	N25CK21	6-12
	Validate, and Transmit	N25CK22	6-12

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
NEC 2 of 5 Message Length	Minimum (2 - 80) *4	N25MIN##	6-13
	Maximum (2 - 80) *80	N25MAX##	6-13
Code 93	Default All Code 93 Settings	C93DFT	6-14
	Off	C93ENA0	6-14
	*On	C93ENA1	6-16
Code 93 Message Length	Minimum (0 - 80) *0	C93MIN##	6-14
	Maximum (0 - 80) *80	C93MAX##	6-14
Code 93 Append	On	C93APP1	6-15
	*Off	C93APP0	6-15
Code 93 Code Page	Code 93 Code Page	C93DCP	6-15
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Industrial Settings	R25DFT	6-16
	*Off	R25ENA0	6-16
	On	R25ENA1	6-16
Straight 2 of 5 Industrial Message Length	Minimum (1 - 48) *4	R25MIN##	6-16
	Maximum (1 - 48) *48	R25MAX##	6-16
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT	6-17
Straight 2 of 5 IATA	*Off	A25ENA0	6-17
	On	A25ENA1	6-17
Straight 2 of 5 IATA Message Length	Minimum (1 - 48) *4	A25MIN##	6-17
	Maximum (1 - 48) *48	A25MAX##	6-17
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT	6-18
	*Off	X25ENA0	6-18
	On	X25ENA1	6-18

Selection	Setting *** Indicates default***	Serial Command ***# Indicates a numeric entry***	Page
Matrix 2 of 5 Message Length	Minimum (1 - 80) *4	X25MIN##	6-18
	Maximum (1 - 80) *80	X25MAX##	6-18
Code 11	Default All Code 11 Settings	C11DFT	6-19
	*Off	C11ENA0	6-19
	On	C11ENA1	6-19
Code 11 Check Digits Required	1 Check Digit	C11CK20	6-19
	*2 Check Digits	C11CK21	6-19
Code 11 Message Length	Minimum (1 - 80) *4	C11MIN##	6-20
	Maximum (1 - 80) *80	C11MAX##	6-20
Code 128	Default All Code 128 Settings	128DFT	6-20
	Off	128ENA0	6-20
	*On	128ENA1	6-20
ISBT Concatenation	*Off	ISBENA0	6-21
	On	ISBENA1	6-21
Code 128 Message Length	Minimum (0 - 80) *0	128MIN##	6-21
	Maximum (0 - 80) *80	128MAX##	6-21
Code 128 Append	On	128APP1	6-21
	*Off	128APP0	6-21
Code 128 Code Page	Code 128 Code Page (*2)	128DCP##	6-22
GS1-128	Default All GS1-128 Settings	GS1DFT	6-23
	*On	GS1ENA1	6-23
	Off	GS1ENA0	6-23
GS1-128 Message Length	Minimum (1 - 80) *1	GS1MIN##	6-23
	Maximum (0 - 80) *80	GS1MAX##	6-23

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Telepen	Default All Telepen Settings	TELDFT	6-24
	*Off	TELENA0	6-24
	On	TELENA1	6-24
Telepen Output	*AIM Telepen Output	TELOLD0	6-24
	Original Telepen Output	TELOLD1	6-24
Telepen Message Length	Minimum (1 - 60) *1	TELMIN##	6-25
	Maximum (1 - 60) *60	TELMAX##	6-25
UPC-A	Default All UPC-A Settings	UPADFT	6-25
	Off	UPAENA0	6-26
	*On	UPAENA1	6-26
UPC-A Check Digit	Off	UPACKX0	6-25
	*On	UPACKX1	6-26
UPC-A Number System	Off	UPANSX0	6-26
	*On	UPANSX1	6-26
UPC-A 2 Digit Addenda	*Off	UPAAD20	6-26
	On	UPAAD21	6-26
UPC-A 5 Digit Addenda	*Off	UPAAD50	6-26
	On	UPAAD51	6-26
UPC-A Addenda Required	*Not Required	UPAARQ0	6-27
	Required	UPAARQ1	6-27
UPC-A Addenda Separator	Off	UPAADS0	6-27
	*On	UPAADS1	6-27
UPC-A/EAN-13 with Extended Coupon Code	*Off	CPNENA0	6-28
	Allow Concatenation	CPNENA1	6-28
	Require Concatenation	CPNENA2	6-28
Coupon GS1 DataBar Output	GS1 Output Off	CPNGS10	6-28
	GS1 Output On	CPNGS11	6-28

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
UPC-E0	Default All UPC-E Settings	UPEDFT	6-29
	Off	UPEEN00	6-29
	*On	UPEEN01	6-29
UPC-E0 Expand	*Off	UPEEXP0	6-29
	On	UPEEXP1	6-29
UPC-E0 Addenda Required	Required	UPEARQ1	6-30
	*Not Required	UPEARQ0	6-30
UPC-E0 Addenda Separator	*On	UPEADS1	6-30
	Off	UPEADS0	6-30
UPC-E0 Check Digit	Off	UPECKX0	6-30
	*On	UPECKX1	6-30
UPC-E0 Number System	Off	UPENSX0	6-31
	*On	UPENSX1	6-31
UPC-E0 Addenda	2 Digit Addenda On	UPEAD21	6-31
	*2 Digit Addenda Off	UPEAD20	6-31
	5 Digit Addenda On	UPEAD51	6-31
	*5 Digit Addenda Off	UPEAD50	6-31
UPC-E1	*Off	UPEEN10	6-32
	On	UPEEN11	6-32
EAN/JAN-13	Default All EAN/ JAN Settings	E13DFT	6-32
	Off	E13ENA0	6-32
	*On	E13ENA1	6-32
EAN/JAN-13 Check Digit	Off	E13CKX0	6-33
	*On	E13CKX1	6-32
EAN/JAN-13 2 Digit Addenda	2 Digit Addenda On	E13AD21	6-33
	*2 Digit Addenda Off	E13AD20	6-33
	5 Digit Addenda On	E13AD51	6-33
	*5 Digit Addenda Off	E13AD50	6-33
EAN/JAN-13 Addenda Required	*Not Required	E13ARQ0	6-33
	Required	E13ARQ1	6-33

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
EAN/JAN-13 Addenda Separator	Off	E13ADS0	6-34
	*On	E13ADS1	6-34
ISBN Translate	*Off	E13ISB0	6-34
	On	E13ISB1	6-34
EAN/JAN-8	Default All EAN/ JAN 8 Settings	EA8DFT	6-35
	Off	EA8ENA0	6-35
	*On	EA8ENA1	6-35
EAN/JAN-8 Check Digit	Off	EA8CKX0	6-35
	*On	EA8CKX1	6-35
EAN/JAN-8 Addenda	*2 Digit Addenda Off	EA8AD20	6-36
	2 Digit Addenda On	EA8AD21	6-36
	*5 Digit Addenda Off	EA8AD50	6-36
	5 Digit Addenda On	EA8AD51	6-36
EAN/JAN-8 Addenda Required	*Not Required	EA8ARQ0	6-36
	Required	EA8ARQ1	6-36
EAN/JAN-8 Addenda Separator	Off	EA8ADS0	6-36
	*On	EA8ADS1	6-36
MSI	Default All MSI Settings	MSIDFT	6-37
	*Off	MSIENA0	6-37
	On	MSIENA1	6-37

Selection	Setting *** Indicates default**	Serial Command **# Indicates a numeric entry**	Page
MSI Check Character	*Validate Type 10, but Don't Transmit	MSICHK0	6-38
	Validate Type 10 and Transmit	MSICHK1	6-38
	Validate 2 Type 10 Chars, but Don't Transmit	MSICHK2	6-38
	Validate 2 Type 10 Chars and Transmit	MSICHK3	6-38
	Validate Type 10 then Type 11 Char, but Don't Transmit	MSICHK4	6-38
	Validate Type 10 then Type 11 Char and Transmit	MSICHK5	6-38
	Disable MSI Check Characters	MSICHK6	6-38
MSI Message Length	Minimum (4 - 48) *4	MSIMIN##	6-38
	Maximum (4 - 48) *48	MSIMAX##	6-38
GS1 DataBar Omnidirectional	Default All GS1 DataBar Omnidirectional Settings	RSSDFT	6-39
	Off	RSSENA0	6-39
	*On	RSSENA1	6-39
GS1 DataBar Limited	Default All GS1 DataBar Limited Settings	RSLDFT	6-39
	Off	RSLENA0	6-39
	*On	RSLENA1	6-39

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
GS1 DataBar Expanded	Default All GS1 DataBar Expanded Settings	RSEDFT	6-40
	Off	RSEENA0	6-40
	*On	RSEENA1	6-40
GS1 DataBar Expanded Msg. Length	Minimum (4 - 74) *4	RSEMIN##	6-40
	Maximum (4 - 74) *74	RSEMAX##	6-40
Codablock A	Default All Codablock A Settings	CBADFT	6-41
	*Off	CBAENA0	6-41
	On	CBAENA1	6-41
Codablock A Msg. Length	Minimum (1 - 600) *1	CBAMIN####	6-41
	Maximum (1 - 600) *600	CBAMAX####	6-41
Codablock F	Default All Codablock F Settings	CBFDFT	6-42
	*Off	CBFENA0	6-42
	On	CBFENA1	6-42
Codablock F Msg. Length	Minimum (1 - 2048) *1	CBFMIN####	6-42
	Maximum (1 - 2048) *2048	CBFMAX####	6-42
PDF417	Default All PDF417 Settings	PDFDFT	6-43
	*On	PDFENA1	6-43
	Off	PDFENA0	6-43
PDF417 Msg. Length	Minimum (1-2750) *1	PDFMIN####	6-43
	Maximum (1-2750) *2750	PDFMAX####	6-43

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
MacroPDF417	*On	PDFMAC1	6-44
	Off	PDFMAC0	6-44
MicroPDF417	Default All Micro PDF417 Settings	MPDDFT	6-44
	On	MPDENA1	6-44
	*Off	MPDENA0	6-44
MicroPDF417 Msg. Length	Minimum (1-366) *1	MPDMIN###	6-45
	Maximum (1-366) *366	MPDMAX###	6-45
GS1 Composite Codes	On	COMENA1	6-45
	*Off	COMENA0	6-45
UPC/EAN Version	On	COMUPC1	6-45
	*Off	COMUPC0	6-45
GS1 Composite Codes Msg. Length	Minimum (1-2435) *1	COMMIN####	6-46
	Maximum (1-2435) *2435	COMMAX####	6-46
GS1 Emulation	GS1-128 Emulation	EANEMU1	6-47
	GS1 DataBar Emulation	EANEMU2	6-47
	GS1 Code Expansion Off	EANEMU3	6-47
	EAN8 to EAN13 Conversion	EANEMU4	6-47
	*GS1 Emulation Off	EANEMU0	6-47
TCIF Linked Code 39	On	T39ENA1	6-47
	*Off	T39ENA0	6-47
QR Code	Default All QR Code Settings	QRCDFT	6-55
	*On	QRCENA1	6-48
	Off	QRCENA0	6-48

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
QR Code Msg. Length	Minimum (1-7089) *1	QRCMIN####	6-48
	Maximum (1-7089) *7089	QRCMAX####	6-48
QR Code Append	*On	QRCAPP1	6-49
	Off	QRCAPP0	6-49
QR Code Page	QR Code Page (*3)	QRCDCP##	6-49
Data Matrix	Default All Data Matrix Settings	IDMDFT	6-50
	*On	IDMENA1	6-50
	Off	IDMENA0	6-50
Data Matrix Msg. Length	Minimum (1-3116) *1	IDMMIN####	6-50
	Maximum (1-3116) *3116	IDMMAX####	6-50
Data Matrix Append	*On	IDMAPP1	6-51
	Off	IDMAPP0	6-51
Data Matrix Code Page	Data Matrix Code Page (*51)	IDMDCP##	6-51
MaxiCode	Default All MaxiCode Settings	MAXDFT	6-52
	On	MAXENA1	6-52
	*Off	MAXENA0	6-52
MaxiCode Msg. Length	Minimum (1-150) *1	MAXMIN###	6-52
	Maximum (1-150) *150	MAXMAX###	6-52
Aztec Code	Default All Aztec Code Settings	AZTDFT	6-53
	*On	AZTENA1	6-53
	Off	AZTENA0	6-53
Aztec Code Msg. Length	Minimum (1-3832) *1	AZTMIN####	6-53
	Maximum (1-3832) *3832	AZTMAX####	6-53

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Aztec Append	On	AZTAPP1	6-54
	*Off	AZTAPP0	6-54
Aztec Code Page	Aztec Code Page (*51)	AZTDCP##	6-54
Chinese Sensible (Han Xin) Code	Default All Han Xin Code Settings	HX_DFT	6-55
	On	HX_ENA1	6-55
	*Off	HX_ENA0	6-55
Chinese Sensible (Han Xin) Code Msg. Length	Minimum (1-7833) *1	HX_MIN####	6-55
	Maximum (1-7833) *7833	HX_MAX####	6-55
Postal Codes - Linear			
China Post (Hong Kong 2 of 5)	Default All China Post (Hong Kong 2 of 5) Settings	CPCDFT	6-55
	*Off	CPCENA0	6-56
	On	CPCENA1	6-56
China Post (Hong Kong 2 of 5) Msg. Length	Minimum (2 - 80) *4	CPCMIN##	6-56
	Maximum (2 - 80) *80	CPCMAX##	6-56
Korea Post	Default All Korea Post Settings	KPCDFT	6-57
	*Off	KPCENA0	6-57
	On	KPCENA1	6-57
Korea Post Msg. Length	Minimum (2 - 80) *4	KPCMIN##	6-57
	Maximum (2 - 80) *48	KPCMAX##	6-57
Korea Post Check Digit	Transmit Check Digit	KPCCHK1	6-57
	*Don’t Transmit Check Digit	KPCCHK0	6-57
Postal Codes - 2D			
2D Postal Codes	*Off	POSTAL0	6-57

Selection	**Setting** ** Indicates default*	**Serial Command** *# Indicates a numeric entry*	**Page**
Single 2D Postal Codes	Australian Post On	POSTAL1	6-58
	British Post On	POSTAL7	6-58
	Canadian Post On	POSTAL30	6-58
	Intelligent Mail Bar Code On	POSTAL10	6-58
	Japanese Post On	POSTAL3	6-58
	KIX Post On	POSTAL4	6-58
	Planet Code On	POSTAL5	6-59
	Postal-4i On	POSTAL9	6-59
	Postnet On	POSTAL6	6-59
	Postnet with B and B' Fields On	POSTAL11	6-59
	InfoMail On	POSTAL2	6-59

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Combination 2D Postal Codes	InfoMail and British Post On	POSTAL8	6-59
	Intelligent Mail Bar Code and Postnet with B and B' Fields On	POSTAL20	6-59
	Postnet and Postal-4i On	POSTAL14	6-59
	Postnet and Intelligent Mail Bar Code On	POSTAL16	6-60
	Postal-4i and Intelligent Mail Bar Code On	POSTAL17	6-60
	Postal-4i and Postnet with B and B' Fields On	POSTAL19	6-60
	Planet and Postnet On	POSTAL12	6-60
	Planet and Postnet with B and B' Fields On	POSTAL18	6-60
	Planet and Postal-4i On	POSTAL13	6-60
	Planet and Intelligent Mail Bar Code On	POSTAL15	6-60
	Planet, Postnet, and Postal-4i On	POSTAL21	6-61
	Planet, Postnet, and Intelligent Mail Bar Code On	POSTAL22	6-61
	Planet, Postal-4i, and Intelligent Mail Bar Code On	POSTAL23	6-61

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Combination 2D Postal Codes (continued)	Postnet, Postal-4i, and Intelligent Mail Bar Code On	POSTAL24	6-61
	Planet, Postal-4i, and Postnet with B and B' Fields On	POSTAL25	6-61
	Planet, Intelligent Mail Bar Code, and Postnet with B and B' Fields On	POSTAL26	6-61
	Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On	POSTAL27	6-61
	Planet, Postal-4i, Intelligent Mail Bar Code, and Postnet On	POSTAL28	6-62
	Planet, Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On	POSTAL29	6-62
Planet Code Check Digit	Transmit	PLNCKX1	6-62
	*Don't Transmit	PLNCKX0	6-62
Postnet Check Digit	Transmit	NETCKX1	6-62
	*Don't Transmit	NETCKX0	6-62
Australian Post Interpretation	Bar Output	AUSINT0	6-63
	Numeric N Table	AUSINT1	6-63
	Alphanumeric C Table	AUSINT2	6-63
	Combination N and C Tables	AUSINT3	6-63
Utilities			
Add Code I.D. Prefix to All Symbologies (Temporary)		PRECA2,BK2995C80!	8-1

Selection	**Setting** **** Indicates default***	**Serial Command** ***# Indicates a numeric entry***	**Page**
Show Decoder Revision		REV_DR	8-1
Show Scan Driver Revision		REV_SD	8-1
Show Software Revision		REVINF	8-1
Show Data Format		DFMBK3?	8-2
Resetting the Factory Defaults	Remove Custom Defaults	DEFOVR	8-4
	Activate Defaults	DEFALT	8-4

10 Product Specifications

Voyager 1400g Scanner Product Specifications

Parameter	***Specification***
Mechanical	
Height	1.7 inches (43mm)
Length	7.1 inches (180mm)
Width	2.6 inches (66mm)
Weight	4.2 ounces (119g)
Electrical	
Input Voltage	4 to 5.5VDC
Operating Power	2W; 400 mA (typical) @ 5VDC
Standby Power	.45W; 90 mA (typical) @ 5VDC
Environmental	
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-40°F to 140°F (-40°C to 60°C)
Humidity	5 to 95% non-condensing
Drop	Operational after 30 drops to concrete from 5 ft. (1.5m)
Environmental Sealing	IP42
Light Levels	0 - 100,000 lux (direct sunlight)
ESD	± 4kv direct discharge ± 8kv air discharge
Image	
Image Size	640x480
Scan Performance	
Pitch, Skew	60°, 70°
Motion Tolerance: Presentation Mode	up to 10cm per second for 13 mil UPC
Symbol Contrast	35%
DOF with 5 mil, 1D bar code	
Typical Performance 5 mil Code 39	36 - 105mm (1.4 - 4.1 in.)
13 mil UPC-A	30 - 255mm (1.2 - 10 in.)
20 mil Code 39	35 - 355mm (1.4 - 14 in.)

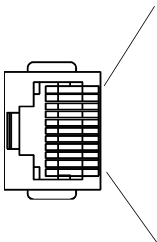
Parameter	*Specification*
6.7 mil PDF417	35 - 100mm (1.4 - 3.9 in.)
10mil Data Matrix	35 - 105mm (1.4 - 4.1 in.)
20mil QR Code	25 - 205mm (1 - 1.81 in.)
Guaranteed Performance 5 mil Code 39	50 - 95mm (2 - 3.7 in.)
13 mil UPC-A	34 - 200mm (1.3 - 7.9 in.)

Standard Connector Pinouts

Note: The following pin assignments are not compatible with Honeywell legacy products. Use of a cable with improper pin assignments may lead to damage to the unit. Use of any cables not provided by the manufacturer may result in damage not covered by your warranty.

Keyboard Wedge

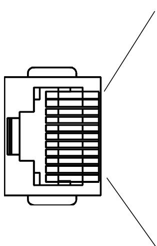
10 Pin RJ41 Modular Plug



1	Cable shield
2	Cable select
3	Supply ground
4	Terminal data
5	Terminal clock
6	Keyboard clock
7	+5V power
8	Keyboard data
9	
10	

Serial Output

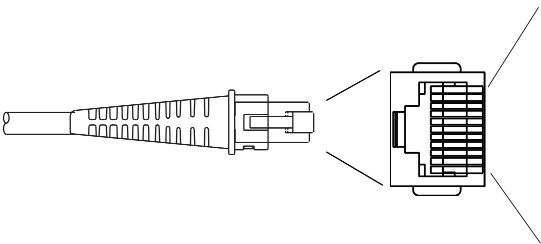
10 Pin RJ41 Modular Plug



1	Cable shield
2	Cable select
3	Supply ground
4	Transmit data
5	Receive data - serial data to scanner
6	CTS
7	+5V power
8	RTS
9	
10	

USB

10 Pin Modular Plug

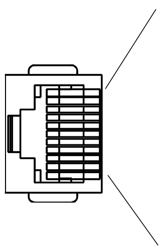


1	Cable shield
2	Cable select
3	Supply ground
4	
5	
6	
7	+5V power
8	
9	Data +
10	Data -

RS485 Output

10 Pin RJ41 Modular Plug

Note: RS485 signal conversion is performed in the cable.



1	Cable shield
2	Cable select
3	Supply ground
4	Transmit data
5	Receive data - serial data to scanner
6	
7	+5V power
8	Transmit Enable
9	
10	

11 Maintenance

Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed only by an authorized service center (see Customer Support on page 12-1).

Maintenance

Your device provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks ensure dependable operation:

Cleaning the Device

Reading performance may degrade if the scanner's window is not clean. If the window is visibly dirty, or if the scanner isn't operating well, clean the window with a soft cloth or lens tissue dampened with water (or a mild detergent- water solution). If a detergent solution is used, rinse with a clean lens tissue dampened with water only.

The scanner and base's housing may also be cleaned the same way.

> ⚠ **Caution:**
>
> **Do not submerge the scanner in water. The scanner's housing is not watertight.**
>
> **Do not use abrasive wipes or tissues on the scanner's window – abrasive wipes may scratch the window. Never use solvents (e.g., alcohol or acetone) on the housing or window – solvents may damage the finish or the window.**

Inspecting Cords and Connectors

Inspect the interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation. Contact your distributor for information about cable replacement. Cable replacement instructions are on page 11-1.

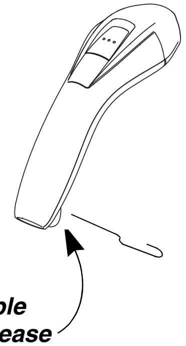
Replacing Cables

The standard interface cable is attached to the scanner with an 10-pin modular connector. When properly seated, the connector is held in the scanner's handle by a flexible retention tab. The interface cable is designed to be field replaceable.

- Order replacement cables from Honeywell or from an authorized distributor.
- When ordering a replacement cable, specify the cable part number of the original interface cable.

Replacing an Interface Cable

1. Turn the power to the host system OFF.
2. Disconnect the scanner's cable from the terminal or computer.
3. Locate the small hole on the back of the scanner's handle. This is the cable release.
4. Straighten one end of a paper clip.
5. Insert the end of the paper clip into the small hole and press in. This depresses the retention tab, releasing the connector. Pull the connector out while maintaining pressure on the paper clip, then remove the paper clip.
6. Replace with the new cable.
   Insert the connector into the opening and press firmly. The connector is keyed to go in only one way, and will click into place.



Troubleshooting a Voyager 1400g Scanner

The scanner automatically performs self-tests whenever you turn it on. If your scanner is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

Is the power on? Is the aimer on?

If the aimer isn't illuminated, check that:

- The cable is connected properly.
- The host system power is on (if external power isn't used).
- The button works.

Is the scanner having trouble reading your symbols?

If the scanner isn't reading symbols well, check that the scanner window is clean and that the symbols:

- Aren't smeared, rough, scratched, or exhibiting voids.
- Aren't coated with frost or water droplets on the surface.
- Are enabled in the scanner or in the decoder to which the scanner connects.

Is the bar code displayed but not entered?

The bar code is displayed on the host device correctly, but you still have to press a key to enter it (the Enter/Return key or the Tab key, for example).

- You need to program a suffix. Programming a suffix enables the scanner to output the bar code data plus the key you need (such as “CR”) to enter the data into your application. Refer to Prefix/Suffix Overview beginning on page 4-1 for further information.

Does the scanner read the bar code incorrectly?

If the scanner reads a bar code, but the data is not displayed correctly on the host screen:

- The scanner may not be programmed for the appropriate terminal interface.
  For example, you scan “12345” and the host displays “@es%.”

Reprogram the scanner with the correct Plug and Play bar code. See Programming the Interface beginning on page 2-1.

- The scanner may not be programmed to output your bar code data properly.
  For example, you scan “12345” and the host displays “A12345B.”

Reprogram the scanner with the proper symbology selections. See Chapter 6.

The scanner won’t read your bar code at all.

- Scan the sample bar codes in the back of this manual. If the scanner reads the sample bar codes, check that your bar code is readable. Verify that your bar code symbology is enabled (see Chapter 6).

If the scanner still can’t read the sample bar codes, scan All Symbologies (page 6-2).

If you aren’t sure what programming options have been set in the scanner, or if you want the factory default settings restored, refer to Resetting the Custom Defaults on page 1-7.

12 Customer Support

Technical Assistance

If you need assistance installing or troubleshooting your device, please contact us by using one of the methods below:

Knowledge Base: www.hsmknowledgebase.com

Our Knowledge Base provides thousands of immediate solutions. If the Knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.

Technical Support Portal: www.hsmsupportportal.com

The Technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.

Web form: www.hsmcontactsupport.com

You can contact our technical support team directly by filling out our online support form. Enter your contact details and the description of the question/problem.

Telephone: www.honeywellaidc.com/locations

For our latest contact information, please check our website at the link above.

Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To obtain warranty or non-warranty service, please visit www.honeywellaidc.com and select **Support > Contact Service and Repair** to see your region's instructions on how to obtain a Return Material Authorization number (RMA #). You should do this prior to returning the product.

Limited Warranty

Honeywell International Inc. ("HII") warrants its products to be free from defects in materials and workmanship and to conform to HII's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any HII product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than HII or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by HII for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to HII factory or authorized service center for inspection. No product will be accepted by HII without a Return Materials Authorization, which may be obtained by contacting HII. In the event that the product is returned to HII or its authorized service center within the Warranty Period and HII determines to its satisfaction that the product is defective due to defects in materials or workmanship, HII , at its sole option, will either repair or replace the product without charge, except for return shipping to HII.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HII MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. HII extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The duration of the limited warranty for the Voyager 1400g scanner is five (5) years.

A

Reference Charts

Symbology Charts

Note: "m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details.

Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.

Refer to Data Editing beginning on page 4-1 and Data Formatting beginning on page 5-1 for information about using Code ID and AIM ID.

Linear Symbologies

	AIM		Honeywell	
Symbology	**ID**	**Possible modifiers (*m*)**	**ID**	**Hex**
All Symbologies				99
Codabar	]F*m*	0-1	a	61
Code 11	]H3		h	68
Code 128	]C*m*	0, 1, 2, 4	j	6A
Code 32 Pharmaceutical (PARAF)	]X0		<	3C
Code 39 (supports Full ASCII mode)	]A*m*	0, 1, 3, 4, 5, 7	b	62
TCIF Linked Code 39 (TLC39)	]L2		T	54
Code 93 and 93i	]G*m*	0-9, A-Z, a-m	i	69
EAN	]E*m*	0, 1, 3, 4	d	64
EAN-13 (including Bookland EAN)	]E0		d	64
EAN-13 with Add-On	]E3		d	64
EAN-13 with Extended Coupon Code	]E3		d	64
EAN-8	]E4		D	44
EAN-8 with Add-On	]E3		D	44

	AIM		Honeywell	
Symbology	**ID**	**Possible modifiers (*m*)**	**ID**	**Hex**
GS1				
GS1 DataBar	]e*m*	0	y	79
GS1 DataBar Limited	]e*m*		{	7B
GS1 DataBar Expanded	]e*m*		}	7D
GS1-128	]C1		I	49
2 of 5				
China Post (Hong Kong 2 of 5)	]X0		Q	51
Interleaved 2 of 5	]I*m*	0, 1, 3	e	65
Matrix 2 of 5	]X0		m	6D
NEC 2 of 5	]X0		Y	59
Straight 2 of 5 IATA	]R*m*	0, 1, 3	f	66
Straight 2 of 5 Industrial	]S0		f	66
MSI	]M*m*	0, 1	g	67
Telepen	]B*m*		t	74
UPC		0, 1, 2, 3, 8, 9, A, B, C		
UPC-A	]E0		c	63
UPC-A with Add-On	]E3		c	63
UPC-A with Extended Coupon Code	]E3		c	63
UPC-E	]E0		E	45
UPC-E with Add-On	]E3		E	45
UPC-E1	]X0		E	45

Add Honeywell Code ID				5C80
Add AIM Code ID				5C81
Add Backslash				5C5C
Batch mode quantity			5	35

2D Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Aztec Code	]z*m*	0-9, A-C	z	7A
Chinese Sensible Code (Han Xin Code)	]X0		H	48
Codablock A	]O6	0, 1, 4, 5, 6	V	56
Codablock F	]O*m*	0, 1, 4, 5, 6	q	71
Code 49	]T*m*	0, 1, 2, 4	l	6C
Data Matrix	]d*m*	0-6	w	77
GS1	]e*m*	0-3	y	79
GS1 Composite	]e*m*	0-3	y	79
GS1 DataBar Omnidirectional	]e*m*	0-3	y	79
MaxiCode	]U*m*	0-3	x	78
PDF417	]L*m*	0-2	r	72
MicroPDF417	]L*m*	0-5	R	52
QR Code	]Q*m*	0-6	s	73
Micro QR Code	]Q*m*		s	73

Postal Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Australian Post	]X0		A	41
British Post	]X0		B	42
Canadian Post	]X0		C	43

Symbology	AIM ID	AIM Possible modifiers (*m*)	Honeywell ID	Honeywell Hex
China Post	]X0		Q	51
InfoMail	]X0		,	2c
Intelligent Mail Bar Code	]X0		M	4D
Japanese Post	]X0		J	4A
KIX (Netherlands) Post	]X0		K	4B
Korea Post	]X0		?	3F
Planet Code	]X0		L	4C
Postal-4i	]X0		N	4E
Postnet	]X0		P	50

ASCII Conversion Chart (Code Page 1252)

In keyboard applications, ASCII Control Characters can be represented in 3 different ways, as shown below. The CTRL+X function is OS and application dependent. The following table lists some commonly used Microsoft functionality. This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings.

Non-printable ASCII control characters			Keyboard Control + ASCII (CTRL+X) Mode		
				Windows Mode Control + X Mode On (KBDCAS2)	
DEC	HEX	Char	Control + X Mode Off (KBDCAS0)	CTRL + X	CTRL + X function
0	00	NUL	Reserved	CTRL+ @	
1	01	SOH	NP Enter	CTRL+ A	Select all
2	02	STX	Caps Lock	CTRL+ B	Bold
3	03	ETX	ALT Make	CTRL+ C	Copy
4	04	EOT	ALT Break	CTRL+ D	Bookmark
5	05	ENQ	CTRL Make	CTRL+ E	Center
6	06	ACK	CTRL Break	CTRL+ F	Find
7	07	BEL	Enter / Ret	CTRL+ G	
8	08	BS	*(Apple Make)*	CTRL+ H	History
9	09	HT	Tab	CTRL+ I	Italic
10	0A	LF	*(Apple Break)*	CTRL+ J	Justify

Non-printable ASCII control characters			Keyboard Control + ASCII (CTRL+X) Mode		
				Windows Mode Control + X Mode On (KBDCAS2)	
DEC	HEX	Char	Control + X Mode Off (KBDCAS0)	CTRL + X	CTRL + X function
11	0B	VT	Tab	CTRL+ K	hyperlink
12	0C	FF	Delete	CTRL+ L	list, left align
13	0D	CR	Enter / Ret	CTRL+ M	
14	0E	SO	Insert	CTRL+ N	New
15	0F	SI	ESC	CTRL+ O	Open
16	10	DLE	F11	CTRL+ P	Print
17	11	DC1	Home	CTRL+ Q	Quit
18	12	DC2	PrtScn	CTRL+ R	
19	13	DC3	Backspace	CTRL+ S	Save
20	14	DC4	Back Tab	CTRL+ T	
21	15	NAK	F12	CTRL+ U	
22	16	SYN	F1	CTRL+ V	Paste
23	17	ETB	F2	CTRL+ W	
24	18	CAN	F3	CTRL+ X	
25	19	EM	F4	CTRL+ Y	
26	1A	SUB	F5	CTRL+ Z	
27	1B	ESC	F6	CTRL+ [	
28	1C	FS	F7	CTRL+ \	
29	1D	GS	F8	CTRL+]	
30	1E	RS	F9	CTRL+ ^	
31	1F	US	F10	CTRL+ -	
127	7F	⌂	NP Enter		

Lower ASCII Reference Table

Note: Windows Code page 1252 and lower ASCII use the same characters.

Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c

Printable Characters (Continued)								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
36	24	$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	'	71	47	G	103	67	g
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C	|
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_	127	7F	⌂

Extended ASCII Characters					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
128	80	€	Ç	up arrow ↑	0x48
129	81		ü	down arrow ↓	0x50
130	82	‚	é	right arrow →	0x4B
131	83	ƒ	â	left arrow ←	0x4D
132	84	„	ä	Insert	0x52
133	85	…	à	Delete	0x53

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
134	86	†	å	Home	0x47
135	87	‡	ç	End	0x4F
136	88	ˆ	ê	Page Up	0x49
137	89	‰	ë	Page Down	0x51
138	8A	Š	è	Right ALT	0x38
139	8B	‹	ï	Right CTRL	0x1D
140	8C	Œ	î	Reserved	n/a
141	8D		ì	Reserved	n/a
142	8E	Ž	Ä	Numeric Keypad Enter	0x1C
143	8F		Å	Numeric Keypad /	0x35
144	90		É	F1	0x3B
145	91	‘	æ	F2	0x3C
146	92	’	Æ	F3	0x3D
147	93	“	ô	F4	0x3E
148	94	”	ö	F5	0x3F
149	95	•	ò	F6	0x40
150	96	–	û	F7	0x41
151	97	—	ù	F8	0x42
152	98	˜	ÿ	F9	0x43
153	99	™	Ö	F10	0x44
154	9A	š	Ü	F11	0x57
155	9B	›	¢	F12	0x58
156	9C	œ	£	Numeric Keypad +	0x4E
157	9D		¥	Numeric Keypad -	0x4A
158	9E	ž	₧	Numeric Keypad *	0x37
159	9F	Ÿ	ƒ	Caps Lock	0x3A
160	A0		á	Num Lock	0x45
161	A1	¡	í	Left Alt	0x38
162	A2	¢	ó	Left Ctrl	0x1D
163	A3	£	ú	Left Shift	0x2A
164	A4	¤	ñ	Right Shift	0x36
165	A5	¥	Ñ	Print Screen	n/a
166	A6	¦	ª	Tab	0x0F
167	A7	§	º	Shift Tab	0x8F
168	A8	¨	¿	Enter	0x1C
169	A9	©	⌐	Esc	0x01
170	AA	ª	¬	Alt Make	0x36
171	AB	«	½	Alt Break	0xB6
172	AC	¬	¼	Control Make	0x1D

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
173	AD		¡	Control Break	0x9D
174	AE	®	«	Alt Sequence with 1 Character	0x36
175	AF	¯	»	Ctrl Sequence with 1 Character	0x1D
176	B0	°	░		
177	B1	±	▒		
178	B2	²	▓		
179	B3	³	│		
180	B4	´	┤		
181	B5	µ	╡		
182	B6	¶	╢		
183	B7	·	╖		
184	B8	¸	╕		
185	B9	¹	╣		
186	BA	º	║		
187	BB	»	╗		
188	BC	¼	╝		
189	BD	½	╜		
190	BE	¾	╛		
191	BF	¿	┐		
192	C0	À	└		
193	C1	Á	┴		
194	C2	Â	┬		
195	C3	Ã	├		
196	C4	Ä	─		
197	C5	Å	í		
198	C6	Æ	╞		
199	C7	Ç	╟		
200	C8	È	╚		
201	C9	É	╔		
202	CA	Ê	╩		
203	CB	Ë	╦		
204	CC	Ì	╠		
205	CD	Í	═		
206	CE	Î	╬		
207	CF	Ï	╧		
208	D0	Ð	╨		
209	D1	Ñ	╤		
210	D2	Ò	╥		
211	D3	Ó	╙		

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
212	D4	Ô	╘		
213	D5	Õ	╒		
214	D6	Ö	╓		
215	D7	×	╫		
216	D8	Ø	╪		
217	D9	Ù	┘		
218	DA	Ú	┌		
219	DB	Û	█		
220	DC	Ü	▄		
221	DD	Ý	▌		
222	DE	Þ	▐		
223	DF	ß	▀		
224	E0	à	α		
225	E1	á	ß		
226	E2	â	Γ		
227	E3	ã	π		
228	E4	ä	Σ		
229	E5	å	σ		
230	E6	æ	µ		
231	E7	ç	τ		
232	E8	è	Φ		
233	E9	é	Θ		
234	EA	ê	Ω		
235	EB	ë	δ		
236	EC	ì	∞		
237	ED	í	φ		
238	EE	î	ε		
239	EF	ï	∩		
240	F0	ð	≡		
241	F1	ñ	±		
242	F2	ò	≥		
243	F3	ó	≤		
244	F4	ô	⌠		
245	F5	õ	⌡		
246	F6	ö	÷		
247	F7	÷	≈		
248	F8	ø	°		
249	F9	ù	∙		
250	FA	ú	·		

Extended ASCII Characters (Continued)					
DEC	**HEX**	**CP 1252**	**ASCII**	**Alternate Extended**	**PS2 Scan Code**
251	FB	û	√		
252	FC	ü	^{n}		
253	FD	ý	^{2}		
254	FE	þ	■		
255	FF	ÿ			

ISO 2022/ISO 646 Character Replacements

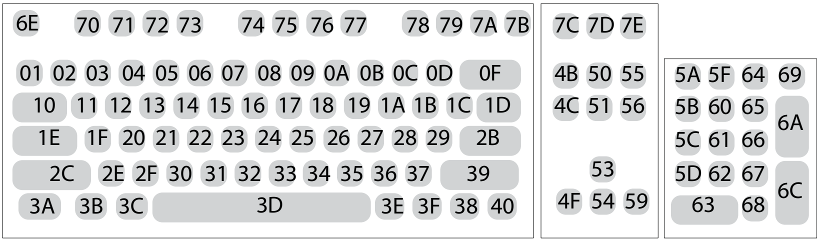
Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, select the code page with which the bar codes were created. The data characters should then appear properly.

Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell Code Page Option
United States (standard ASCII)	ISO/IEC 646-IRV	n/a	1
Automatic National Character Replacement	**ISO/IEC 2022**	**n/a**	**2 (default)**
Binary Code page	n/a	n/a	3
Default "Automatic National Character replacement" will select the below Honeywell Code Page options for Code128, Code 39 and Code 93.			
United States	ISO/IEC 646-06	0	1
Canada	ISO /IEC 646-121	54	95
Canada	ISO /IEC 646-122	18	96
Japan	ISO/IEC 646-14	28	98
China	ISO/IEC 646-57	92	99
Great Britain (UK)	ISO /IEC 646-04	7	87

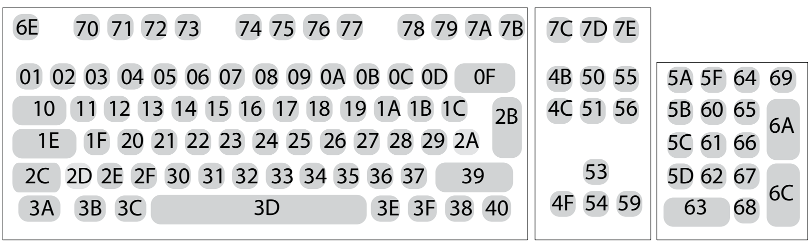
Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell Code Page Option
France	ISO /IEC 646-69	3	83
Germany	ISO/IEC646-21	4	84
Switzerland	ISO /IEC 646-CH	6	86
Sweden / Finland (extended Annex C)	ISO/IEC 646-11	2	82
Ireland	ISO /IEC 646-207	73	97
Danmark	ISO/IEC 646-08	8	88
Norway	ISO/IEC 646-60	9	94
Italy	ISO/IEC 646-15	5	85
Portugal	ISO/IEC 646-16	13	92
Spain	ISO/IEC 646-17	10	90
Spain	ISO/IEC 646-85	51	91

<table>
<tr><th colspan="3">Dec</th><th>35</th><th>36</th><th>64</th><th>91</th><th>92</th><th>93</th><th>94</th><th>96</th><th>123</th><th>124</th><th>125</th><th>126</th></tr>
<tr><th colspan="3">Hex</th><th>23</th><th>24</th><th>40</th><th>5B</th><th>5C</th><th>5D</th><th>5E</th><th>60</th><th>7B</th><th>7C</th><th>7D</th><th>7E</th></tr>
<tr><td>US</td><td>0</td><td>1</td><td>#</td><td>$</td><td>@</td><td>[</td><td>\</td><td>]</td><td>^</td><td>`</td><td>{</td><td>|</td><td>}</td><td>~</td></tr>
<tr><td>CA</td><td>54</td><td>95</td><td>#</td><td>$</td><td>à</td><td>â</td><td>ç</td><td>ê</td><td>î</td><td>ô</td><td>é</td><td>ù</td><td>è</td><td>û</td></tr>
<tr><td>CA</td><td>18</td><td>96</td><td>#</td><td>$</td><td>à</td><td>â</td><td>ç</td><td>ê</td><td>É</td><td>ô</td><td>é</td><td>ù</td><td>è</td><td>û</td></tr>
<tr><td>JP</td><td>28</td><td>98</td><td>#</td><td>$</td><td>@</td><td>[</td><td>¥</td><td>]</td><td>^</td><td>`</td><td>{</td><td>|</td><td>}</td><td>‾</td></tr>
<tr><td>CN</td><td>92</td><td>99</td><td>#</td><td>¥</td><td>@</td><td>[</td><td>\</td><td>]</td><td>^</td><td>`</td><td>{</td><td>|</td><td>}</td><td>‾</td></tr>
<tr><td>GB</td><td>7</td><td>87</td><td>£</td><td>$</td><td>@</td><td>[</td><td>\</td><td>]</td><td>^</td><td>`</td><td>{</td><td>|</td><td>}</td><td>~</td></tr>
<tr><td>FR</td><td>3</td><td>83</td><td>£</td><td>$</td><td>à</td><td>°</td><td>ç</td><td>§</td><td>^</td><td>µ</td><td>é</td><td>ù</td><td>è</td><td>¨</td></tr>
<tr><td>DE</td><td>4</td><td>84</td><td>#</td><td>$</td><td>§</td><td>Ä</td><td>Ö</td><td>Ü</td><td>^</td><td>`</td><td>ä</td><td>ö</td><td>ü</td><td>ß</td></tr>
<tr><td>CH</td><td>6</td><td>86</td><td>ù</td><td>$</td><td>à</td><td>é</td><td>ç</td><td>ê</td><td>î</td><td>ô</td><td>ä</td><td>ö</td><td>ü</td><td>û</td></tr>
<tr><td>SE/FI</td><td>2</td><td>82</td><td>#</td><td>¤</td><td>É</td><td>Ä</td><td>Ö</td><td>Å</td><td>Ü</td><td>é</td><td>ä</td><td>ö</td><td>å</td><td>ü</td></tr>
<tr><td>DK</td><td>8</td><td>88</td><td>#</td><td>$</td><td>@</td><td>Æ</td><td>Ø</td><td>Å</td><td>^</td><td>`</td><td>æ</td><td>ø</td><td>å</td><td>~</td></tr>
<tr><td>NO</td><td>9</td><td>94</td><td>#</td><td>$</td><td>@</td><td>Æ</td><td>Ø</td><td>Å</td><td>^</td><td>`</td><td>æ</td><td>ø</td><td>å</td><td>¨</td></tr>
<tr><td>IE</td><td>73</td><td>97</td><td>£</td><td>$</td><td>Ó</td><td>É</td><td>Í</td><td>Ú</td><td>Á</td><td>ó</td><td>é</td><td>í</td><td>ú</td><td>á</td></tr>
<tr><td>IT</td><td>5</td><td>85</td><td>£</td><td>$</td><td>§</td><td>°</td><td>ç</td><td>é</td><td>^</td><td>ù</td><td>à</td><td>ò</td><td>è</td><td>ì</td></tr>
<tr><td>PT</td><td>13</td><td>92</td><td>#</td><td>$</td><td>§</td><td>Ã</td><td>Ç</td><td>Õ</td><td>^</td><td>`</td><td>ã</td><td>ç</td><td>õ</td><td>°</td></tr>
<tr><td>ES</td><td>10</td><td>90</td><td>#</td><td>$</td><td>§</td><td>¡</td><td>Ñ</td><td>¿</td><td>^</td><td>`</td><td>°</td><td>ñ</td><td>ç</td><td>~</td></tr>
<tr><td>ES</td><td>51</td><td>91</td><td>#</td><td>$</td><td>·</td><td>¡</td><td>Ñ</td><td>Ç</td><td>¿</td><td>`</td><td>´</td><td>ñ</td><td>ç</td><td>¨</td></tr>
<tr><th>COUNTRY</th><th>Country Keyboard</th><th>Honeywell CodePage</th><td colspan="12">ISO / IEC 646 National Character Replacements</td></tr>
</table>

Unicode Key Maps



104 Key U.S. Style Keyboard



105 Key European Style Keyboard

Sample Symbols

UPC-A

0 123456 7890

Code 128

Code 128

Code 39

BC321

Code 93

123456-9$

Interleaved 2 of 5

1234567890

EAN-13

9 780330 290951

Codabar

A13579B

Straight 2 of 5 Industrial

123456

Sample Symbols

Matrix 2 of 5

6543210

GS1 DataBar

(01)00123456789012

PDF417

Car Registration

Data Matrix

Test Symbol

QR Code

Numbers

4-CB (4-State Customer Bar Code)

01,234,567094,987654321,01234567891

ID-tag (UPU 4-State)

J18CUSA8E6N062315014880T

Sample Symbols

Aztec

Package Label

Micro PDF417

Test Message

MaxiCode

Test Message

Postnet

Zip Code

Programming Chart

K0K

0

K1K

1

K2K

2

K3K

3

K4K

4

K5K

5

K6K

6

K7K

7

K8K

8

K9K

9

Programming Chart

KAK

A

KBK

B

KCK

C

KDK

D

KEK

E

KFK

F

MNUSAV.

Save

MNUABT.

Discard

RESET_.

Reset

Note: If you make an error while scanning the letters or digits (before scanning Save), scan Discard, scan the correct letters or digits, and ***Save*** *again.*

Honeywell Scanning & Mobility
9680 Old Bailes Road
Fort Mill, SC 29707

VG1400-UG Rev C
9/14